

STIC Search Report

Biotech-Chem Library

STIC Database Tracking Number: 121692

TO: Zohreh Fay
Location: 4a59 / 4c70
Monday, May 17, 2004
Art Unit: 1614
Phone: 272-0573
Serial Number: 09 / 445919

From: Jan Delaval
Location: Biotech-Chem Library
Rem 1A51
Phone: 272-2504
jan.delaval@uspto.gov

Search Notes

121692

Access DB# _____

SEARCH REQUEST FORM

Scientific and Technical Information Center

Requester's Full Name: Zohreh Fey Examiner #: 66646 Date: 5/16/04
Art Unit: 1614 Phone Number 301-571-2727 Serial Number: 09/445,919
Mail Box and Bldg/Room Location: 4C70 Results Format Preferred (circle): PAPER DISK E-MAIL

If more than one search is submitted, please prioritize searches in order of need.

Please provide a detailed statement of the search topic, and describe as specifically as possible the subject matter to be searched. Include the elected species or structures, keywords, synonyms, acronyms, and registry numbers, and combine with the concept or utility of the invention. Define any terms that may have a special meaning. Give examples or relevant citations, authors, etc, if known. Please attach a copy of the cover sheet, pertinent claims, and abstract.

Title of Invention: See Bib sheet

Inventors (please provide full names): _____

Earliest Priority Filing Date: _____

**For Sequence Searches Only* Please include all pertinent information (parent, child, divisional, or issued patent numbers) along with the appropriate serial number.*

please search the claimed composition and
use, specifically the composition of claims 1 and 2
and the use of claims 9 and 10.

Jan

STAFF USE ONLY

Type of Search

Vendors and cost where applicable

Searcher: <u>Jan</u>	NA Sequence (#) _____	STN <u>✓</u>
Searcher Phone #: <u>22504</u>	AA Sequence (#) _____	Dialog _____
Searcher Location: _____	Structure (#) <u>✓</u>	Questel/Orbit _____
Date Searcher Picked Up: <u>5/17/04</u>	Bibliographic _____	Dr.Link _____
Date Completed: <u>5/17/04</u>	Litigation _____	Lexis/Nexis _____
Searcher Prep & Review Time: _____	Fulltext _____	Sequence Systems _____
Clerical Prep Time: <u>20</u>	Patent Family _____	WWW/Internet _____
Online Time: <u>+ 120</u>	Other _____	Other (specify) _____

=> fil reg
FILE 'REGISTRY' ENTERED AT 15:34:18 ON 17 MAY 2004
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Property values tagged with IC are from the ZIC/VINITI data file
provided by InfoChem.

STRUCTURE FILE UPDATES: 16 MAY 2004 HIGHEST RN 682330-24-1
DICTIONARY FILE UPDATES: 16 MAY 2004 HIGHEST RN 682330-24-1

TSCA INFORMATION NOW CURRENT THROUGH JANUARY 6, 2004

Please note that search-term pricing does apply when
conducting SmartSELECT searches.

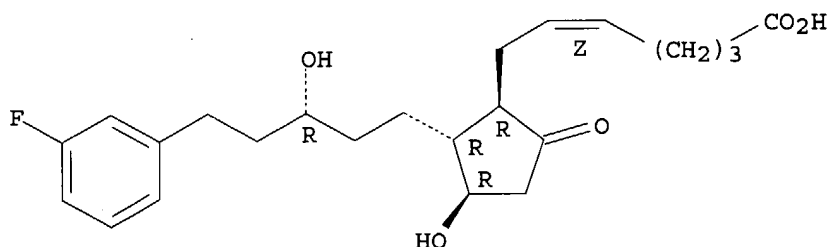
Crossover limits have been increased. See HELP CROSSOVER for details.

Experimental and calculated property data are now available. For more
information enter HELP PROP at an arrow prompt in the file or refer
to the file summary sheet on the web at:
<http://www.cas.org/ONLINE/DBSS/registryss.html>

=> d ide can tot l29

L29 ANSWER 1 OF 2 REGISTRY COPYRIGHT 2004 ACS on STN
RN 219828-15-6 REGISTRY
CN 5-Heptenoic acid, 7-[(1R,2R,3R)-2-[(3R)-5-(3-fluorophenyl)-3-
hydroxypentyl]-3-hydroxy-5-oxocyclopentyl]-, (5Z)- (9CI) (CA INDEX NAME)
FS STEREOSEARCH
MF C23 H31 F O5
SR CA
LC STN Files: CA, CAPLUS

Absolute stereochemistry.
Double bond geometry as shown.



PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

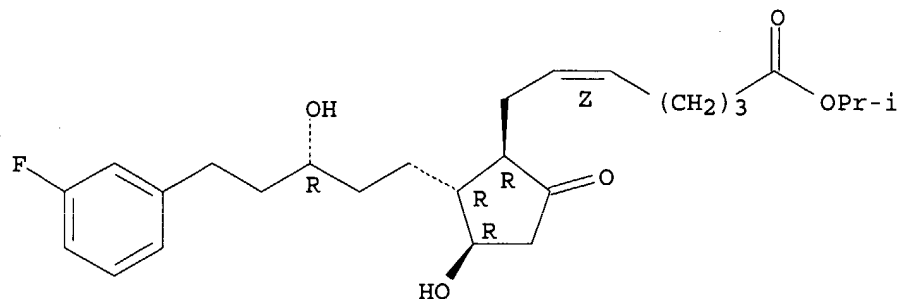
1 REFERENCES IN FILE CA (1907 TO DATE)
1 REFERENCES IN FILE CAPLUS (1907 TO DATE)

REFERENCE 1: 130:119579

L29 ANSWER 2 OF 2 REGISTRY COPYRIGHT 2004 ACS on STN
RN 219827-63-1 REGISTRY
CN 5-Heptenoic acid, 7-[(1R,2R,3R)-2-[(3R)-5-(3-fluorophenyl)-3-
hydroxypentyl]-3-hydroxy-5-oxocyclopentyl]-, 1-methylethyl ester, (5Z)-
(9CI) (CA INDEX NAME)
FS STEREOSEARCH

MF C26 H37 F O5
 SR CA
 LC STN Files: CA, CAPLUS

Absolute stereochemistry.
 Double bond geometry as shown.

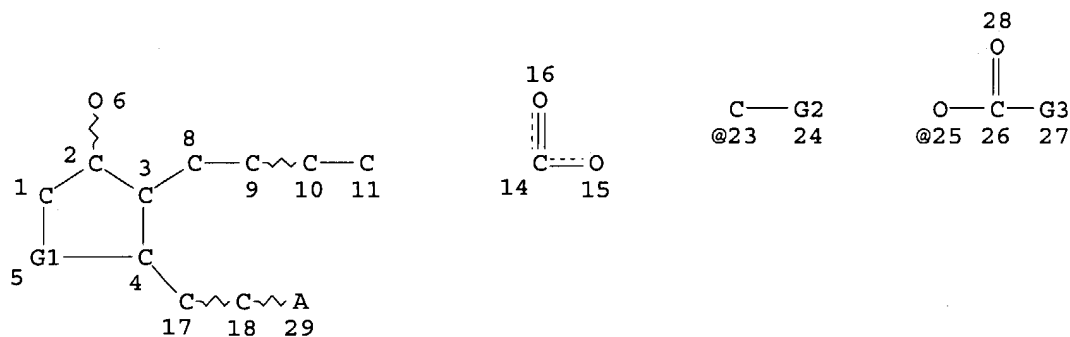


PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

1 REFERENCES IN FILE CA (1907 TO DATE)
 1 REFERENCES IN FILE CAPLUS (1907 TO DATE)

REFERENCE 1: 130:119579

=> d sta que 174
 L72 STR



VAR G1=C/23
 VAR G2=OH/ME/ET/OME/25
 VAR G3=AK/CY
 NODE ATTRIBUTES:
 CONNECT IS E2 RC AT 11
 CONNECT IS E3 RC AT 14
 CONNECT IS M1 RC AT 15
 CONNECT IS M1 RC AT 29
 DEFAULT MLEVEL IS ATOM
 DEFAULT ECLEVEL IS LIMITED

GRAPH ATTRIBUTES:
 RSPEC 4
 NUMBER OF NODES IS 22

STEREO ATTRIBUTES: NONE
 L74 10918 SEA FILE=REGISTRY CSS FUL L72

100.0% PROCESSED 34389 ITERATIONS
SEARCH TIME: 00.00.02

10918 ANSWERS

=> d his

(FILE 'HOME' ENTERED AT 13:48:38 ON 17 MAY 2004)
SET COST OFF

FILE 'HCAPLUS' ENTERED AT 13:49:29 ON 17 MAY 2004

L1 1 S WO98-SE1368/AP,PRN OR SE97-2706/AP,PRN
E STJERNSCHANTZ J/AU
L2 85 S E3-E7
E RESUL B/AU
L3 50 S E3,E4
E LAKE S/AU
L4 34 S E3-E7,E13
SEL RN L1

FILE 'REGISTRY' ENTERED AT 13:50:50 ON 17 MAY 2004

L5 38 S E1-E38
L6 11 S L5 AND 46.150.18/RID AND F/ELS AND NR>=2
L7 6 S L6 NOT SI/ELS
L8 27 S L5 NOT L6
L9 22 S L8 AND NR>=1
L10 18 S L9 NOT SI/ELS
L11 12 S L10 NOT 46.150.18/RID
L12 4 S L11 NOT C4/ES
L13 2 S L12 AND C5/ES
E PGE2/CN
L14 1 S E3

FILE 'HCAPLUS' ENTERED AT 13:59:52 ON 17 MAY 2004

L15 139 S L2-L4 NOT L1

FILE 'REGISTRY' ENTERED AT 14:00:04 ON 17 MAY 2004

FILE 'HCAPLUS' ENTERED AT 14:00:04 ON 17 MAY 2004

SET SMARTSELECT ON
L16 SEL L15 1- RN : 782 TERMS
SET SMARTSELECT OFF

FILE 'REGISTRY' ENTERED AT 14:00:10 ON 17 MAY 2004

L17 782 S L16
L18 176 S L17 AND C5/ES
L19 48 S L18 AND 1/NR
L20 5 S L19 AND PGE2
L21 6 S L17 AND TRINOR
L22 6 S L18 AND DIHYDRO
L23 814 S L5,L17
L24 21 S L23 AND 46.150.18/RID AND F/ELS
L25 13 S L24 NOT (N OR SI)/ELS
L26 11 S L25 AND NR>=2
L27 9 S L26 NOT S/ELS
L28 8 S L27 NOT C15H13FO2
SEL RN 1 6
L29 2 S E1-E2
L30 61 S L23 AND 15
L31 55 S L30 NOT C6/ES
L32 50 S L31 NOT UNSPECIFIED
L33 39 S L32 NOT (SI OR N OR S)/ELS
L34 13 S L33 NOT 16.127.1/RID

L35 26 S L33 NOT L34
L36 3 S L35 AND "E2"
L37 23 S L35 NOT L36
L38 2 S L37 AND PGE2
L39 21 S L37 NOT L38
L40 2 S L39 AND C20H32O5

FILE 'HCAPLUS' ENTERED AT 14:20:46 ON 17 MAY 2004

L41 7491 S TRIMETHYLENE
L42 3 S L41 AND PGE2
L43 23 S L41 AND ?PROSTA?
L44 4 S L43 AND "E2"
L45 19 S L43 NOT L44
L46 4 S L45 AND 16 16

FILE 'REGISTRY' ENTERED AT 14:24:26 ON 17 MAY 2004

L47 1 S 63357-23-3
L48 51 S L23 AND C5/ES AND 1/NR
L49 10 S L48 NOT 16.127.1/RID
L50 41 S L48 NOT L49
L51 29 S L50 NOT (SI OR S OR N)/ELS
L52 23 S L51 AND (15S OR 15R)
L53 6 S L51 NOT L52
L54 13 S L52 AND OXO
L55 10 S L52 NOT L54
E PGE2
L56 211 S E3
L57 198 S L56 AND 15
L58 51 S L56 AND 15R
L59 126 S L56 AND 15S
L60 198 S L57-L59
L61 154 S L60 AND 1/NR
L62 141 S L61 NOT (N OR S OR SI OR P)/ELS
L63 73 S L62 NOT ESTER
L64 70 S L63 NOT L23
L65 66 S L64 AND 1/NC
L66 21 S L65 AND 16
L67 7 S L66 AND 16 16
L68 16 S L62 AND 16 16
L69 9 S L68 NOT L67
L70 STR
L71 50 S L70 CSS
L72 STR L70
L73 50 S L72 CSS SAM
L74 10918 S L72 CSS FUL

FILE 'HCAPLUS' ENTERED AT 15:22:13 ON 17 MAY 2004

L75 1 S L29
E PROSTANOID RECEPTOR/CT
L76 271 S E7
L77 9 S L76 AND ?GLAUCOM?
L78 8 S L76 AND (EYE OR ?OCULAR?) (L) (?HYPERTENS? OR ?HYPOTENS?)
E GLAUCOMA/CT
L79 110 S E3
L80 3766 S E4-E6
E E4+ALL
L81 3876 S E9,E10,E8+NT
L82 723 S E12-E13/BI
E E14+ALL
L83 1362 S E3
L84 8 S L76 AND L79-L83
L85 42287 S L74
L86 198 S L76 AND L85

L87 10 S L75,L77,L78,L84
L88 6 S L86 AND L87
L89 10 S L87,L88
L90 473 S L85 AND EP1
L91 7 S L90 AND L79-L83
L92 8 S L90 AND ?GLAUCOM?
L93 11 S L90 AND (EYE OR ?OCULAR?) (L) (?HYPERTENS? OR ?HYPOTENS?)
L94 16 S L89,L91-L93
L95 1 S L2-L4 AND L75
L96 51 S L2-L4 AND L85
L97 2 S L96 AND EP1
L98 22 S L96 AND L79-L83
L99 26 S L96 AND ?GLAUCOM?
L100 12 S L96 AND (EYE OR ?OCULAR?) (L) (?HYPERTENS? OR ?HYPOTENS?)
L101 16 S L1,L94,L95,L97
L102 49 S L96,L98-L100 NOT L101
L103 35 S L102 AND (PY<=1998 OR PRY<=1998 OR AY<=1998)
L104 8 S L101 AND (PY<=1998 OR PRY<=1998 OR AY<=1998)
L105 3 S L104 AND PGE2
L106 8 S L104,L105
L107 7 S L106 NOT 3/SC
L108 8 S L101 NOT L106
L109 1 S L108 AND RESUL ?/AU
L110 8 S L107,L109
L111 12 S L103 AND (PGE2 OR "E2")
SEL DN AN 11 12 L111
L112 2 S E1-E6 AND L111
L113 10 S L110,L112

FILE 'REGISTRY' ENTERED AT 15:34:18 ON 17 MAY 2004

=> fil hcaplus

FILE 'HCAPLUS' ENTERED AT 15:34:37 ON 17 MAY 2004

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FILE COVERS 1907 - 17 May 2004 VOL 140 ISS 21

FILE LAST UPDATED: 16 May 2004 (20040516/ED)

This file contains CAS Registry Numbers for easy and accurate substance identification.

=> => d all hitstr tot l113

L113 ANSWER 1 OF 10 HCAPLUS COPYRIGHT 2004 ACS on STN

AN 2002:770134 HCAPLUS

DN 137:279023

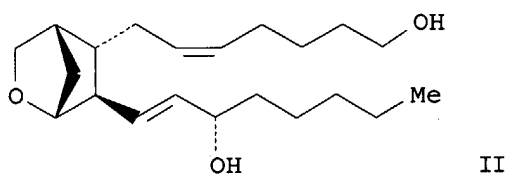
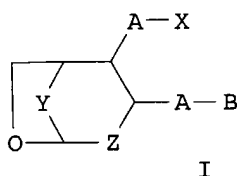
ED Entered STN: 10 Oct 2002

TI Preparation of thromboxane ligands without blood clotting side effects

IN Burk, Robert M.; Krauss, Achim H. P.; Woodward, David F.

PA Allergan, Inc., USA
 SO U.S., 18 pp., Cont.-in-part of U.S. Ser. No. 331,356, abandoned.
 CODEN: USXXAM
 DT Patent
 LA English
 IC ICM C07D307-93
 ICS A01K031-343
 NCL 514469000
 CC 26-3 (Biomolecules and Their Synthetic Analogs)
 Section cross-reference(s): 1, 63
 FAN.CNT 6

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	US 6462077	B1	20021008	US 2001-899713	20010705 <--
	US 5416106	A	19950516	US 1993-174534	19931228 <--
	US 5516791	A	19960514	US 1995-378414	19950126 <--
	US 5650431	A	19970722	US 1996-645467	19960513 <--
	US 5741812	A	19980421	US 1997-832431	19970402 <--
	US 2003109571	A1	20030612	US 2002-213190	20020805 <--
PRAI	US 1993-174534	A3	19931228	<--	
	US 1995-378414	A2	19950126	<--	
	US 1996-645467	A2	19960513	<--	
	US 1997-832431	A1	19970402	<--	
	US 1998-38068	B1	19980311	<--	
	US 1999-331356	B2	19990616		
	US 1999-334356	B2	19990616		
	US 2001-899713	A1	20010705		
OS	MARPAT 137:279023				
GI					



AB Thromboxane agonists of formula I [A = alkylene, alkenylene, etc.; B = Me, cycloalkyl, aryl, heteroaryl, etc.; X = (substituted) CH₂OH, (substituted) CO₂H, etc.; Y = (CH₂)_n; n = 1-2; Z = (CH₂)_m; m = 0-1] are prepared. The compds. are used for the treatment of **ocular hypotension**, **hypertension**, hemorrhage, myocardial ischemia, angina pectoris, coronary contraction, cerebrovascular contraction after subarachnoidal hemorrhage, cerebral hemorrhage and asthma. Thus, II was prepared from U-46619 in two steps. II exhibited pronounced activity in contracting vascular smooth muscle.

ST thromboxane ligand prepn **ocular hypotension**;
 hemorrhage treatment thromboxane agonist prepn

IT Thromboxanes
 RL: PAC (Pharmacological activity); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)
 (agonists; preparation of thromboxane ligands without blood clotting side effects)

IT Heart, disease
 (angina pectoris; preparation of thromboxane ligands without blood clotting side effects)

IT Thromboxanes
 RL: PAC (Pharmacological activity); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES

(Uses)
 (antagonists; preparation of thromboxane ligands without blood clotting side effects)

IT Meninges
 (disease, subarachnoid hemorrhage; preparation of thromboxane ligands without blood clotting side effects)

IT Brain, disease
 (hemorrhage; preparation of thromboxane ligands without blood clotting side effects)

IT Heart, disease
 (ischemia; preparation of thromboxane ligands without blood clotting side effects)

IT **Hypotension**
 (ocular; preparation of thromboxane ligands without blood clotting side effects)

IT Cell aggregation
 (platelet; preparation of thromboxane ligands without blood clotting side effects)

IT Asthma
 Cardiac contraction
 Hemorrhage
 Human
 Hypertension
 (preparation of thromboxane ligands without blood clotting side effects)

IT Thromboxane receptors
 RL: BSU (Biological study, unclassified); BIOL (Biological study)
 (preparation of thromboxane ligands without blood clotting side effects)

IT Hypertension
 (pulmonary; preparation of thromboxane ligands without blood clotting side effects)

IT Prostanoid receptors
 RL: BSU (Biological study, unclassified); BIOL (Biological study)
 (type EP; preparation of thromboxane ligands without blood clotting side effects)

IT **Prostanoid receptors**
 RL: BSU (Biological study, unclassified); BIOL (Biological study)
 (type EP1; preparation of thromboxane ligands without blood clotting side effects)

IT Prostanoid receptors
 RL: BSU (Biological study, unclassified); BIOL (Biological study)
 (type EP3; preparation of thromboxane ligands without blood clotting side effects)

IT 167270-44-2P
 RL: PAC (Pharmacological activity); RCT (Reactant); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); RACT (Reactant or reagent); USES (Uses)
 (preparation of thromboxane ligands without blood clotting side effects)

IT 159359-94-1P 159359-95-2P 159359-97-4P 159359-98-5P 167270-49-7P
 167270-51-1P 193149-59-6P 193149-60-9P 193149-61-0P 193149-62-1P
 RL: PAC (Pharmacological activity); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)
 (preparation of thromboxane ligands without blood clotting side effects)

IT 75-31-0, Isopropylamine, reactions 551-11-1, PGF2 α
 3282-30-2, Trimethylacetyl chloride 56985-40-1, U-46619
 RL: RCT (Reactant); RACT (Reactant or reagent)
 (preparation of thromboxane ligands without blood clotting side effects)

IT 65147-38-8P 71845-64-2P 135877-48-4P
 136198-86-2P 147555-69-9P 147555-72-4P 159359-93-0P
 159359-96-3P 167270-42-0P 167270-43-1P 167270-45-3P 167270-46-4P
 167270-47-5P 167270-48-6P 304854-64-6P
 RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)

(preparation of thromboxane ligands without blood clotting side effects)

RE.CNT 17 THERE ARE 17 CITED REFERENCES AVAILABLE FOR THIS RECORD

RE

- (1) Anon; EP 0364417 1990 HCAPLUS
- (2) Bito; US 4599353 A 1986 HCAPLUS
- (3) Bito, L; Applied Pharmacology in the Medical Treatment of Glaucomas 1984, P477 HCAPLUS
- (4) Bito, L; Arch Ophthalmol 1987, V105, P1036 MEDLINE
- (5) Burk; US 5416106 A 1995 HCAPLUS
- (6) Burk; US 5516791 A 1996 HCAPLUS
- (7) Burk; US 5741812 A 1998 HCAPLUS
- (8) Burk; Tetrahedron Letters 1993, V34(3), P395 HCAPLUS
- (9) Chan; US 4994274 A 1991 HCAPLUS
- (10) Chan; US 5034413 A 1991 HCAPLUS
- (11) Coleman, R; Br J Pharmacol V73, P773 HCAPLUS
- (12) Grover; US 4931460 A 1990 HCAPLUS
- (13) Larock; US 4436934 A 1984 HCAPLUS
- (14) Lieb; US 4622339 A 1986 HCAPLUS
- (15) Nilsson; Invest Ophthalmol Vis Sci 1987, suppl, P284
- (16) Siebold; Prodrug 1989, V5, P3
- (17) Starr, M; Exp Eye Research 1971, P170 HCAPLUS

IT 551-11-1, PGF2 α

RL: RCT (Reactant); RACT (Reactant or reagent)

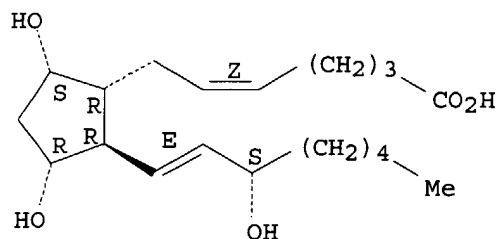
(preparation of thromboxane ligands without blood clotting side effects)

RN 551-11-1 HCAPLUS

CN Prosta-5,13-dien-1-oic acid, 9,11,15-trihydroxy-,
(5Z,9 α ,11 α ,13E,15S)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.

Double bond geometry as shown.



IT 65147-38-8P 71845-64-2P 135877-48-4P

136198-86-2P 147555-72-4P

RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT
(Reactant or reagent)

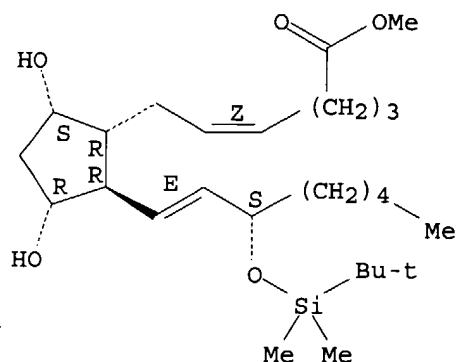
(preparation of thromboxane ligands without blood clotting side effects)

RN 65147-38-8 HCAPLUS

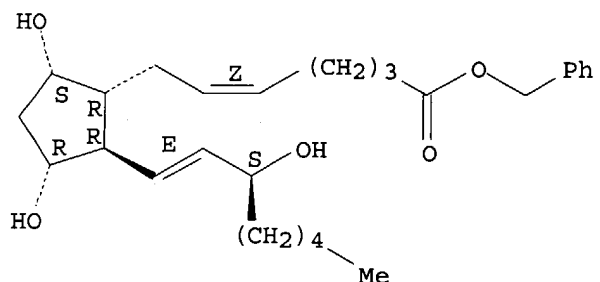
CN Prosta-5,13-dien-1-oic acid, 15-[[[(1,1-dimethylethyl)dimethylsilyl]oxy]-
9,11-dihydroxy-, methyl ester, (5Z,9 α ,11 α ,13E,15S)- (9CI) (CA
INDEX NAME)

Absolute stereochemistry.

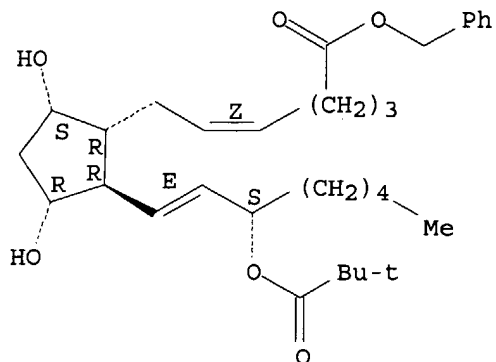
Double bond geometry as shown.



RN 71845-64-2 HCAPLUS

CN Prosta-5,13-dien-1-oic acid, 9,11,15-trihydroxy-, phenylmethyl ester,
(5Z,9 α ,11 α ,13E,15S) - (9CI) (CA INDEX NAME)Absolute stereochemistry.
Double bond geometry as shown.

RN 135877-48-4 HCAPLUS

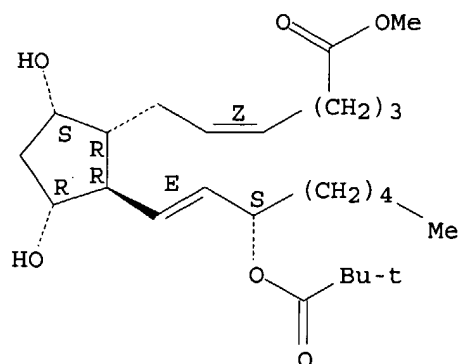
CN Prosta-5,13-dien-1-oic acid, 15-(2,2-dimethyl-1-oxopropoxy)-9,11-dihydroxy-
, phenylmethyl ester, (5Z,9 α ,11 α ,13E,15S) - (9CI) (CA INDEX
NAME)Absolute stereochemistry.
Double bond geometry as shown.

RN 136198-86-2 HCAPLUS

CN Prosta-5,13-dien-1-oic acid, 15-(2,2-dimethyl-1-oxopropoxy)-9,11-dihydroxy-
, methyl ester, (5Z,9 α ,11 α ,13E,15S) - (9CI) (CA INDEX NAME)

Absolute stereochemistry.

Double bond geometry as shown.

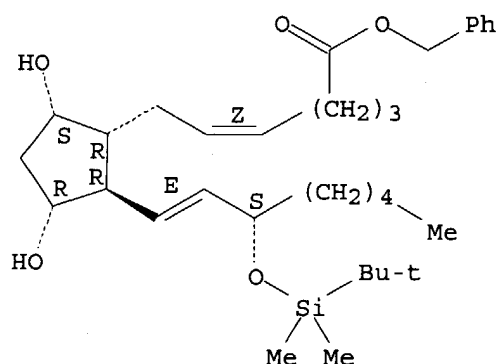


RN 147555-72-4 HCAPLUS

CN Prosta-5,13-dien-1-oic acid, 15-[[[(1,1-dimethylethyl)dimethylsilyl]oxy]-9,11-dihydroxy-, phenylmethyl ester, (5Z,9 α ,11 α ,13E,15S) - (9CI) (CA INDEX NAME)

Absolute stereochemistry.

Double bond geometry as shown.



L113 ANSWER 2 OF 10 HCAPLUS COPYRIGHT 2004 ACS on STN

AN 2000:404486 HCAPLUS

DN 133:275770

ED Entered STN: 20 Jun 2000

TI Microvascular effects of selective prostaglandin analogues in the eye with special reference to latanoprost and **glaucoma** treatment

AU **Stjernschantz, Johan**; Selen, Goran; Astin, Maria; **Resul, Bahram**

CS Department of Neuroscience, Unit of Pharmacology, Uppsala University, Uppsala, Swed.

SO Progress in Retinal and Eye Research (2000), 19(4), 459-496

CODEN: PRTRES; ISSN: 1350-9462

PB Elsevier Science Ltd.

DT Journal; General Review

LA English

CC 1-0 (Pharmacology)

Section cross-reference(s): 2

AB A review with many refs. Prostaglandin F2 α analogs have recently been introduced on the market for **glaucoma** treatment. While these drugs have a well-documented intraocular pressure reducing effect only a limited number of studies have been published regarding their effects on the microvasculature in the eye. Since many naturally occurring

prostaglandins have marked effects on the cardiovascular system it is conceivable that synthetic prostaglandins used as **glaucoma** drugs may exert microvascular effects in the eye, even if they exhibit receptor selectivity. Latanoprost, the active principle of Xalatan eye drops, is a selective FP prostanoid receptor agonist, and much of the paper is focused on the microvascular effects of latanoprost and some closely related prostaglandin analogs. The purpose of the paper is to review the literature on the microvascular effects of prostaglandins in the eye, and to present some unpublished data on the effects of selective prostaglandin analogs. Most of the prostaglandin analogs studied exhibit selectivity for the FP prostanoid receptor. Results from studies with the following prostaglandin analogs are presented in the paper: PGF2 α -iso-Pr ester (PGF2 α -IE), 17-phenyl-18,19,20-trinor-PGF2 α -iso-Pr ester (17-phenyl-PGF2 α -IE), 15-keto-17-phenyl-18,19,20-trinor-PGF2 α -iso-Pr ester (15-keto-17-phenyl-PGF2 α -IE), 13,14-dihydro-17-phenyl-18,19,20-trinor-PGF2 α -iso-Pr ester (latanoprost), 13,14-dihydro-15R,S-17-phenyl-18,19,20-trinor-PGF2 α -iso-Pr ester (PhXA34), 17-phenyl-18,19,20-trinor-PGE2-iso-Pr ester (17-phenyl-PGE2-IE), and 19R-hydroxy-PGE2 (19R-OH-PGE2). The regional blood flow has been determined with radioactively labeled microspheres, the blood volume with 51Cr labeled erythrocytes and the capillary permeability to albumin with 125I and 131I labeled albumin. PGF2 α -IE has been shown to exert marked microvascular effects in the rabbit anterior segment including vasodilation, increased capillary permeability, and a breakdown of the blood-aqueous barrier. 17-Phenyl-PGF2 α -IE, 15-keto-17-phenyl-PGF2 α -IE, and PhXA34/latanoprost exerted significantly less vasodilatory effect, and little effect on capillary permeability was seen with the FP receptor agonists when studied with Evans blue. I.v. administration of PhXA34 at a dose range of 1-100 μ g/kg b.w. had no consistent effect on the regional blood flow in the eye indicating that FP receptors in the ocular blood vessels are not expressed in the rabbit, or alternatively are not functionally coupled to regulation of vascular tone. In cats topical application of PGF2 α -IE had no significant effect the on the regional blood flow in cannulated eyes. No blood flow expts. were performed in intact eyes with PGF2 α -IE, 17-phenyl-PGF2 α -IE and latanoprost caused some vasodilation in the anterior segment. None of the analogs had any significant effect on the blood volume in the ocular tissues, but an increase in capillary permeability to albumin was seen in several tissues of the eye. However, in the eyelid, nictitating membrane and conjunctiva exposed to high concns. of the prostaglandins no or only little leakage of albumin was detected. It appears that the intraocular microvasculature in the cat exhibits some sensitivity to FP prostanoid receptor agonists. In the cynomolgus monkey eye PGF2 α -IE has been shown to cause a dramatic increase in blood flow of the anterior uvea, but only weak effect was detected with the selective FP receptor agonists and an **EP1** receptor agonist after topical administration. I.v. infusion of latanoprost at a dose range of 0.6-6 μ g/kg b.w. had little effect on the blood flow in most ocular tissues, and the same was true for 17-phenyl-PGE2, a relatively selective **EP1** receptor agonist, after intracardiac infusion at about the same dose range. I.v. infusion of the EP2 receptor agonist 19R-OH-PGE2 markedly reduced the vascular resistance in the eye. No significant effect was seen on the blood volume in the ocular tissues with any of the FP receptor agonists after topical administration. PGF2 α -IE increased the capillary permeability to albumin in the anterior segment and possibly the retina, but 17-phenyl-PGF2 α -IE and latanoprost/PhXA34 had no effect on capillary permeability in any of the ocular tissues. Based on the results of previous studies and the expts. described in the present paper it is evident that PGF2 α has significant microvascular effects in the rabbit, cat and monkey eye, causing vasodilation and/or increased capillary permeability, whereas selective FP receptor agonists such as latanoprost exert no or minimal effects in the primate eye, and markedly reduced microvascular effects in the rabbit eye. However, little

difference between PGF2 α and the selective FP receptor agonists was seen in the cat eyes. It also appears that the **EP1** receptor like the FP receptor is not involved in the regulation of vascular tone in the primate eye, whereas stimulation of the EP2 receptor reduces the vascular resistance in the monkey eye. Finally, the microvascular parameters in the control eyes of cats and monkeys are compared and discussed.

ST review prostaglandin analog latanoprost **antiglaucoma**
microvascular effect; species difference eye vascular tone latanoprost
antiglaucoma review

IT Capillary vessel
(endothelium; microvascular effects of prostaglandins in the eye)

IT **Antiglaucoma agents**
Eye
Species differences
(microvascular effects of prostaglandins in the eye)

IT Prostaglandins
RL: BSU (Biological study, unclassified); BIOL (Biological study)
(microvascular effects of prostaglandins in the eye)

IT Circulation
(regional; microvascular effects of prostaglandins in the eye)

IT **130209-82-4, Latanoprost**
RL: BSU (Biological study, unclassified); BIOL (Biological study)
(microvascular effects of prostaglandins in the eye)

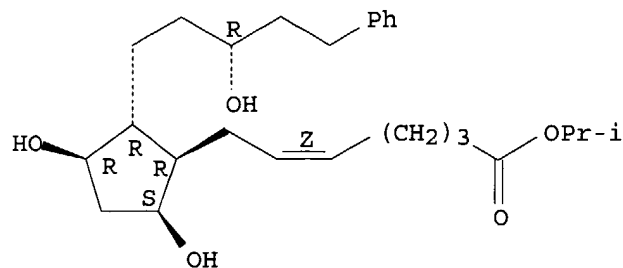
RE.CNT 131 THERE ARE 131 CITED REFERENCES AVAILABLE FOR THIS RECORD
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- IT 130209-82-4, Latanoprost
RL: BSU (Biological study, unclassified); BIOL (Biological study)
(microvascular effects of prostaglandins in the eye)
- RN 130209-82-4 HCAPLUS
- CN 5-Heptenoic acid, 7-[(1R,2R,3R,5S)-3,5-dihydroxy-2-[(3R)-3-hydroxy-5-phenylpentyl]cyclopentyl]-, 1-methylethyl ester, (5Z)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.
Double bond geometry as shown.



L113 ANSWER 3 OF 10 HCAPLUS COPYRIGHT 2004 ACS on STN

AN 1999:344852 HCAPLUS

DN 131:5147

ED Entered STN: 07 Jun 1999

TI Preparation of cyclopentane heptan(ene)ic acid, 2-heteroarylalkenyl derivatives for use as **ocular hypertensive** agents

IN Burk, Robert M.

PA Allergan Sales, Inc., USA

SO PCT Int. Appl., 49 pp.

CODEN: PIXXD2

DT Patent

LA English

IC ICM A61K031-557

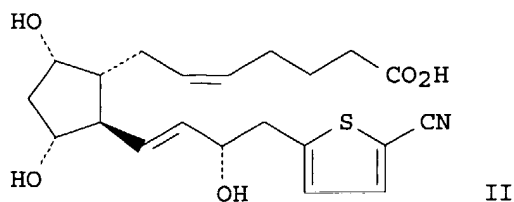
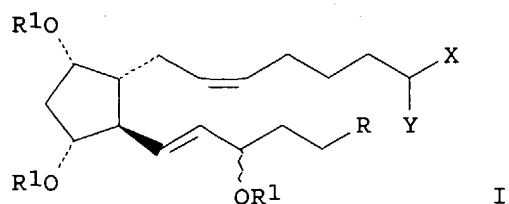
ICS C07D277-30

CC 26-3 (Biomolecules and Their Synthetic Analogs)

Section cross-reference(s): 1, 63

FAN.CNT 3

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 9925358	A1	19990527	WO 1998-US24481	19981117 <--
	W:			AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CU, CZ, DE, DK, EE, ES, FI, GB, GE, GH, GM, HR, HU, ID, IL, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, UA, UG, UZ, VN, YU, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM	
	RW:			GH, GM, KE, LS, MW, SD, SZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG	
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	CA 2310630	AA	19990527	CA 1998-2310630	19981117 <--
	AU 9914616	A1	19990607	AU 1999-14616	19981117 <--
	EP 1032395	A1	20000906	EP 1998-958612	19981117 <--
	R:			AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, FI	
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	JP 2001522893	T2	20011120	JP 2000-520791	19981117 <--
	NZ 504191	A	20021220	NZ 1998-504191	19981117 <--
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PRAI	US 1997-974067	A	19971119	<--	
	US 1993-174535	A3	19931228	<--	
	US 1995-445842	A3	19950711	<--	
	US 1996-740883	A3	19961104	<--	
	US 1997-861414	A2	19970521	<--	
	WO 1998-US24481	W	19981117	<--	
OS	MARPAT 131:5147				
GI					



- AB F-type prostaglandins I [R = heteroaryl such as thienyl; R1 = H, alkyl; X = OH, alkyloxy; Y = :O, H2] were prepared and formulated for use as **ocular hypertensive agents**. Thus, thienylprostaglandin II was prepared starting from [4-(2,5-dichloro-3-thienyl)-2-oxobutyl]-phosphonic acid di-Me ester and (3 α ,4 α ,5 β ,6 α)-hexahydro-2-oxo-5-[(tetrahydro-2H-pyran-2-yl)oxy]-2H-cyclopenta[b]furan-4-carboxaldehyde. The prepared compds. were tested for binding activity to various prostanoid receptors, including EP1, EP2, and EP3.
- ST prostaglandin **ocular hypertensive** prepn; prostanoid receptor binding prostaglandin prepn
- IT Prostanoid receptors
 RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)
 (EP2; preparation of cyclopentane heptan(ene)oic acid, 2-heteroarylalkenyl derivs. for use as **ocular hypertensive agents**)
- IT Prostanoid receptors
 RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)
 (EP3; preparation of cyclopentane heptan(ene)oic acid, 2-heteroarylalkenyl derivs. for use as **ocular hypertensive agents**)
- IT Prostaglandins
 RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)
 (F-type; preparation of cyclopentane heptan(ene)oic acid, 2-heteroarylalkenyl derivs. for use as **ocular hypertensive agents**)
- IT Prostanoid receptors
 RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)
 (preparation of cyclopentane heptan(ene)oic acid, 2-heteroarylalkenyl derivs. for use as **ocular hypertensive agents**)
- IT **225660-96-8P 225660-97-9P 225660-98-0P 225660-99-1P 225661-00-7P 225661-65-4P 225661-66-5P**
 RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); RCT (Reactant); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); RACT (Reactant or reagent); USES (Uses)
 (preparation of cyclopentane heptan(ene)oic acid, 2-heteroarylalkenyl derivs. for use as **ocular hypertensive agents**)
- IT **185067-61-2P 225661-01-8P 225661-02-9P 225661-03-0P 225661-04-1P 225661-05-2P 225661-06-3P 225661-07-4P 225661-08-5P 225661-09-6P 225661-10-9P 225661-11-0P 225661-12-1P 225661-13-2P 225661-14-3P**

225661-15-4P 225661-16-5P 225661-17-6P 225661-19-8P

225661-22-3P 225661-24-5P 225661-27-8P

225661-30-3P 225661-32-5P 225661-34-7P

225661-36-9P 225661-39-2P 225661-41-6P 225661-43-8P

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RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)

(preparation of cyclopentane heptan(ene)oic acid, 2-heteroarylalkenyl derivs. for use as **ocular hypertensive agents**)

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2-Hydroxyethylamine, reactions 17814-85-6 143393-77-5 185067-71-4
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225661-75-6 225661-77-8 225661-79-0

225661-82-5 225661-83-6 225661-84-7

RL: RCT (Reactant); RACT (Reactant or reagent)

(preparation of cyclopentane heptan(ene)oic acid, 2-heteroarylalkenyl derivs. for use as **ocular hypertensive agents**)

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RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)

(preparation of cyclopentane heptan(ene)oic acid, 2-heteroarylalkenyl derivs. for use as **ocular hypertensive agents**)

RE.CNT 3 THERE ARE 3 CITED REFERENCES AVAILABLE FOR THIS RECORD

RE

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IT 225660-96-8P 225660-97-9P 225660-98-0P
225660-99-1P 225661-00-7P 225661-65-4P
225661-66-5P

RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); RCT (Reactant); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); RACT (Reactant or reagent); USES (Uses)

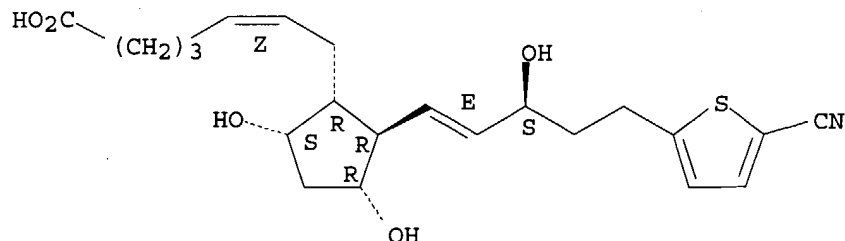
(preparation of cyclopentane heptan(ene)oic acid, 2-heteroarylalkenyl derivs. for use as **ocular hypertensive agents**)

RN 225660-96-8 HCAPLUS

CN 5-Heptenoic acid, 7-[(1R,2R,3R,5S)-2-[(1E,3S)-5-(5-cyano-2-thienyl)-3-hydroxy-1-pentenyl]-3,5-dihydroxycyclopentyl]-, (5Z)-rel- (9CI) (CA INDEX NAME)

Relative stereochemistry.

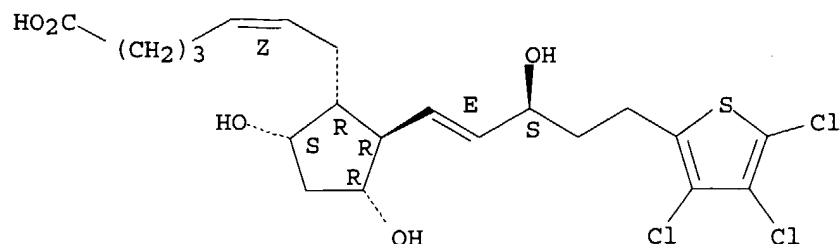
Double bond geometry as shown.



RN 225660-97-9 HCAPLUS

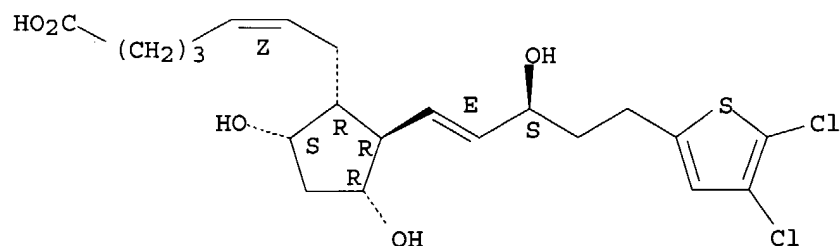
CN 5-Heptenoic acid, 7-[(1R,2R,3R,5S)-3,5-dihydroxy-2-[(1E,3S)-3-hydroxy-5-(3,4,5-trichloro-2-thienyl)-1-pentenyl]cyclopentyl]-, (5Z)-rel- (9CI) (CA INDEX NAME)

Relative stereochemistry.
Double bond geometry as shown.



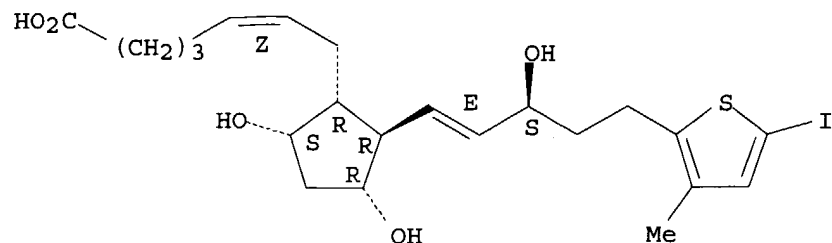
RN 225660-98-0 HCAPLUS
CN 5-Heptenoic acid, 7-[(1R,2R,3R,5S)-2-[(1E,3S)-5-(4,5-dichloro-2-thienyl)-3-hydroxy-1-pentenyl]-3,5-dihydroxycyclopentyl]-, (5Z)-rel- (9CI) (CA INDEX NAME)

Relative stereochemistry.
Double bond geometry as shown.



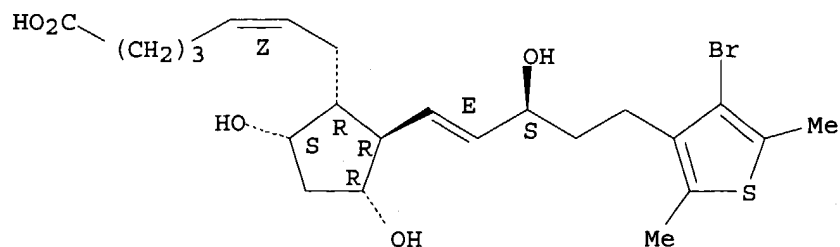
RN 225660-99-1 HCAPLUS
CN 5-Heptenoic acid, 7-[(1R,2R,3R,5S)-3,5-dihydroxy-2-[(1E,3S)-3-hydroxy-5-(5-iodo-3-methyl-2-thienyl)-1-pentenyl]cyclopentyl]-, (5Z)-rel- (9CI) (CA INDEX NAME)

Relative stereochemistry.
Double bond geometry as shown.



RN 225661-00-7 HCAPLUS
CN 5-Heptenoic acid, 7-[(1R,2R,3R,5S)-2-[(1E,3S)-5-(4-bromo-2,5-dimethyl-3-thienyl)-3-hydroxy-1-pentenyl]-3,5-dihydroxycyclopentyl]-, (5Z)-rel- (9CI) (CA INDEX NAME)

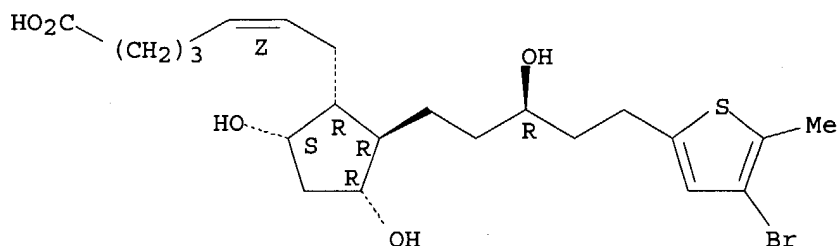
Relative stereochemistry.
Double bond geometry as shown.



RN 225661-65-4 HCAPLUS

CN 5-Heptenoic acid, 7-[(1R,2R,3R,5S)-2-[(3R)-5-(4-bromo-5-methyl-2-thienyl)-3-hydroxypentyl]-3,5-dihydroxycyclopentyl]-, (5Z)-rel- (9CI) (CA INDEX NAME)

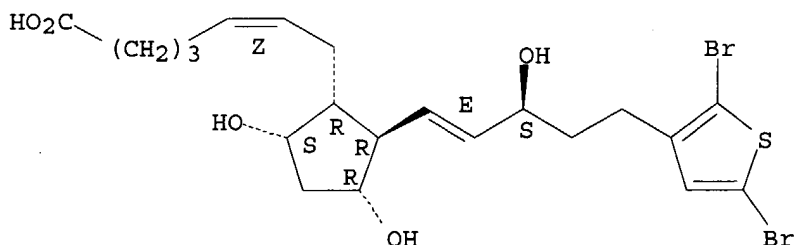
Relative stereochemistry.
Double bond geometry as shown.



RN 225661-66-5 HCAPLUS

CN 5-Heptenoic acid, 7-[(1R,2R,3R,5S)-2-[(1E,3S)-5-(2,5-dibromo-3-thienyl)-3-hydroxy-1-pentenyl]-3,5-dihydroxycyclopentyl]-, (5Z)-rel- (9CI) (CA INDEX NAME)

Relative stereochemistry.
Double bond geometry as shown.



IT 185067-61-2P 225661-10-9P 225661-11-0P

225661-12-1P 225661-13-2P 225661-14-3P

225661-15-4P 225661-17-6P 225661-22-3P

225661-24-5P 225661-27-8P 225661-30-3P

225661-32-5P 225661-34-7P 225661-39-2P

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225661-51-8P 225661-52-9P

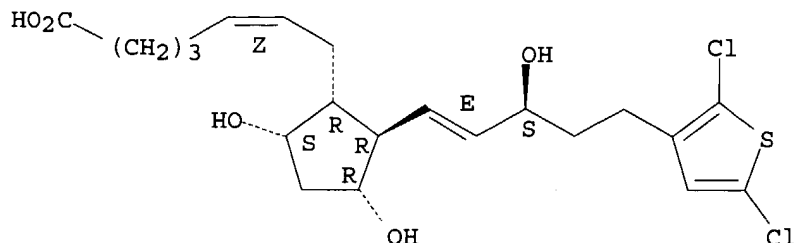
RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)

(preparation of cyclopentane heptan(ene)oic acid, 2-heteroarylalkenyl derivs. for use as **ocular hypertensive agents**)

RN 185067-61-2 HCAPLUS

CN 5-Heptenoic acid, 7-[(1R,2R,3R,5S)-2-[(1E,3S)-5-(2,5-dichloro-3-thienyl)-3-hydroxy-1-pentenyl]-3,5-dihydroxycyclopentyl]-, (5Z)-rel- (9CI) (CA INDEX NAME)

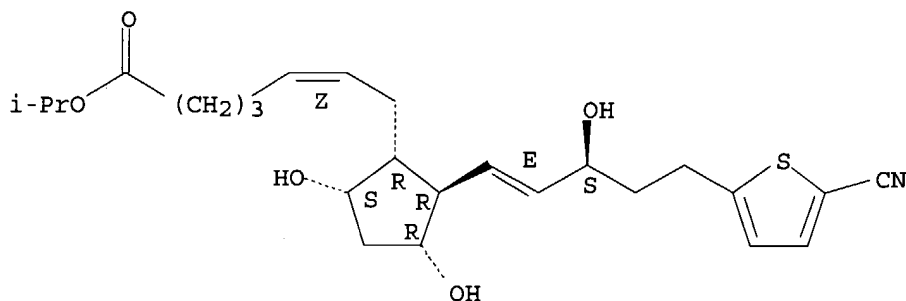
Relative stereochemistry.
Double bond geometry as shown.



RN 225661-10-9 HCAPLUS

CN 5-Heptenoic acid, 7-[(1R,2R,3R,5S)-2-[(1E,3S)-5-(5-cyano-2-thienyl)-3-hydroxy-1-pentenyl]-3,5-dihydroxycyclopentyl]-, 1-methylethyl ester, (5Z)-rel- (9CI) (CA INDEX NAME)

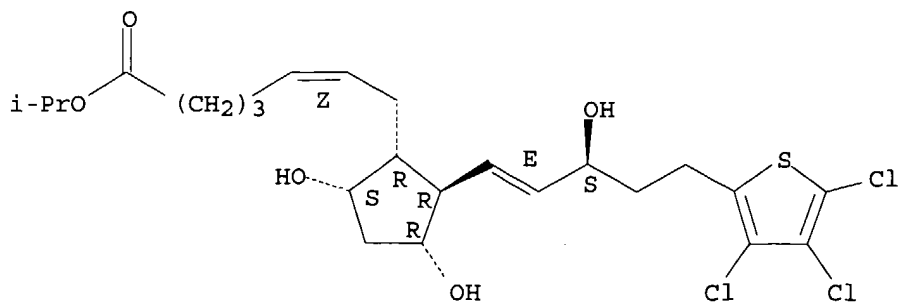
Relative stereochemistry.
Double bond geometry as shown.



RN 225661-11-0 HCAPLUS

CN 5-Heptenoic acid, 7-[(1R,2R,3R,5S)-3,5-dihydroxy-2-[(1E,3S)-3-hydroxy-5-(3,4,5-trichloro-2-thienyl)-1-pentenyl]cyclopentyl]-, 1-methylethyl ester, (5Z)-rel- (9CI) (CA INDEX NAME)

Relative stereochemistry.
Double bond geometry as shown.

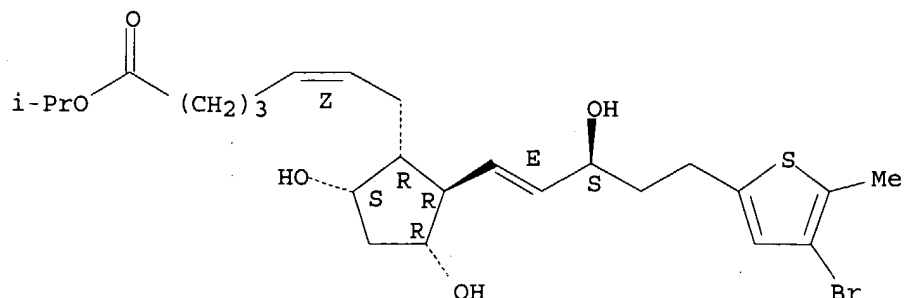


RN 225661-12-1 HCAPLUS

CN 5-Heptenoic acid, 7-[(1R,2R,3R,5S)-2-[(1E,3S)-5-(4-bromo-5-methyl-2-thienyl)-3-hydroxy-1-pentenyl]-3,5-dihydroxycyclopentyl]-, 1-methylethyl

ester, (5Z)-rel- (9CI) (CA INDEX NAME)

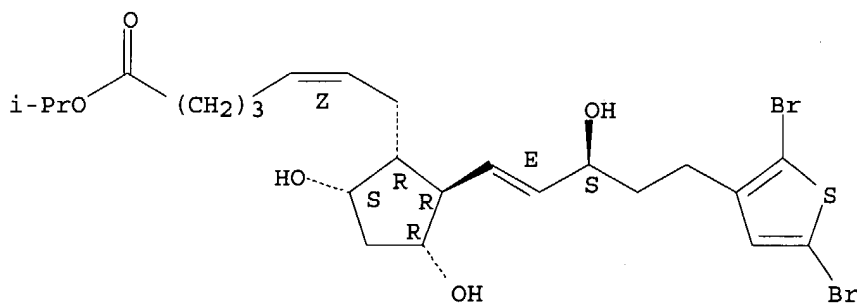
Relative stereochemistry.
Double bond geometry as shown.



RN 225661-13-2 HCAPLUS

CN 5-Heptenoic acid, 7-[(1R,2R,3R,5S)-2-[(1E,3S)-5-(2,5-dibromo-3-thienyl)-3-hydroxy-1-pentenyl]-3,5-dihydroxycyclopentyl]-, 1-methylethyl ester, (5Z)-rel- (9CI) (CA INDEX NAME)

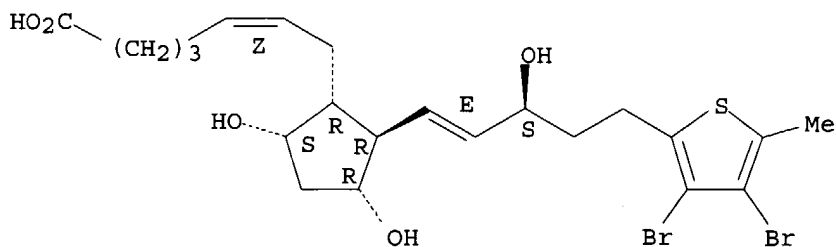
Relative stereochemistry.
Double bond geometry as shown.



RN 225661-14-3 HCAPLUS

CN 5-Heptenoic acid, 7-[(1R,2R,3R,5S)-2-[(1E,3S)-5-(3,4-dibromo-5-methyl-2-thienyl)-3-hydroxy-1-pentenyl]-3,5-dihydroxycyclopentyl]-, (5Z)-rel- (9CI) (CA INDEX NAME)

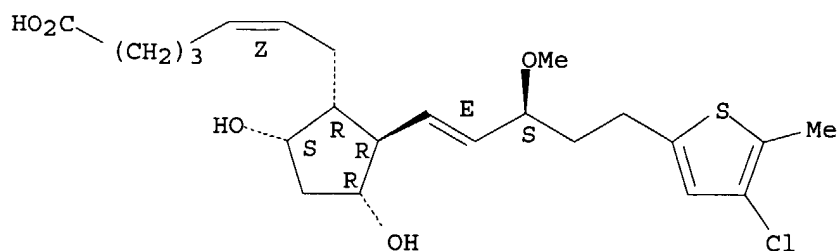
Relative stereochemistry.
Double bond geometry as shown.



RN 225661-15-4 HCAPLUS

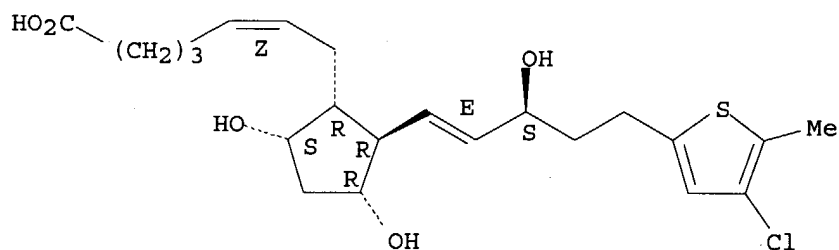
CN 5-Heptenoic acid, 7-[(1R,2R,3R,5S)-2-[(1E,3S)-5-(4-chloro-5-methyl-2-thienyl)-3-methoxy-1-pentenyl]-3,5-dihydroxycyclopentyl]-, (5Z)-rel- (9CI) (CA INDEX NAME)

Relative stereochemistry.
Double bond geometry as shown.



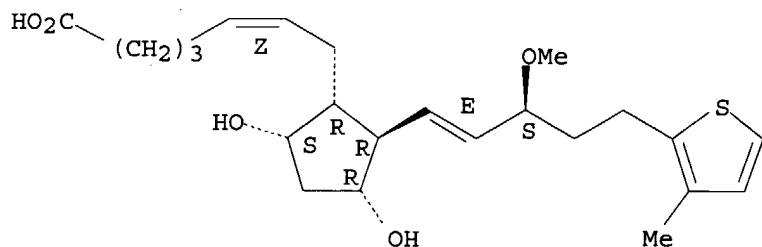
RN 225661-17-6 HCAPLUS
CN 5-Heptenoic acid, 7-[(1R,2R,3R,5S)-2-[(1E,3S)-5-(4-chloro-5-methyl-2-thienyl)-3-hydroxy-1-pentenyl]-3,5-dihydroxycyclopentyl]-, (5Z)-rel- (9CI)
(CA INDEX NAME)

Relative stereochemistry.
Double bond geometry as shown.



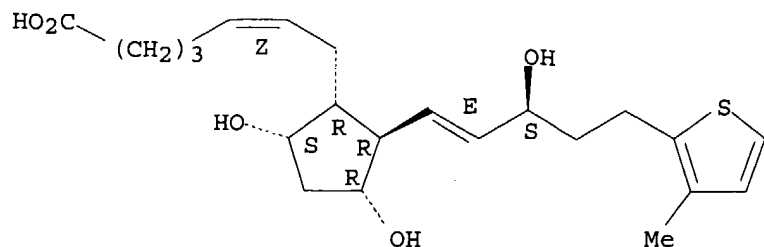
RN 225661-22-3 HCAPLUS
CN 5-Heptenoic acid, 7-[(1R,2R,3R,5S)-3,5-dihydroxy-2-[(1E,3S)-3-methoxy-5-(3-methyl-2-thienyl)-1-pentenyl]cyclopentyl]-, (5Z)-rel- (9CI) (CA INDEX NAME)

Relative stereochemistry.
Double bond geometry as shown.



RN 225661-24-5 HCAPLUS
CN 5-Heptenoic acid, 7-[(1R,2R,3R,5S)-3,5-dihydroxy-2-[(1E,3S)-3-hydroxy-5-(3-methyl-2-thienyl)-1-pentenyl]cyclopentyl]-, (5Z)-rel- (9CI) (CA INDEX NAME)

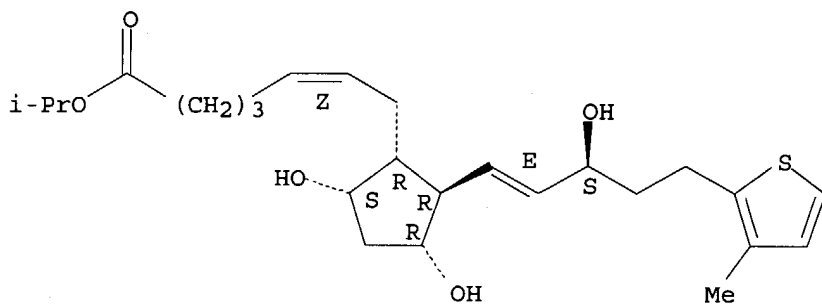
Relative stereochemistry.
Double bond geometry as shown.



RN 225661-27-8 HCAPLUS

CN 5-Heptenoic acid, 7-[(1R,2R,3R,5R)-3,5-dihydroxy-2-[(1E,3S)-3-hydroxy-5-(3-methyl-2-thienyl)-1-pentenyl]cyclopentyl]-, 1-methylethyl ester, (5Z)-rel-(9CI) (CA INDEX NAME)

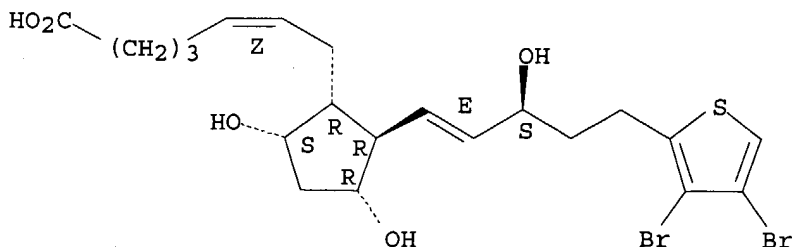
Relative stereochemistry.
Double bond geometry as shown.



RN 225661-30-3 HCAPLUS

CN 5-Heptenoic acid, 7-[(1R,2R,3R,5S)-2-[(1E,3S)-5-(3,4-dibromo-2-thienyl)-3-hydroxy-1-pentenyl]-3,5-dihydroxycyclopentyl]-, (5Z)-rel-(9CI) (CA INDEX NAME)

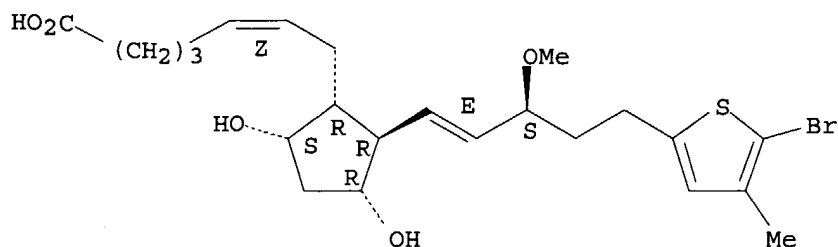
Relative stereochemistry.
Double bond geometry as shown.



RN 225661-32-5 HCAPLUS

CN 5-Heptenoic acid, 7-[(1R,2R,3R,5S)-2-[(1E,3S)-5-(5-bromo-4-methyl-2-thienyl)-3-methoxy-1-pentenyl]-3,5-dihydroxycyclopentyl]-, (5Z)-rel-(9CI) (CA INDEX NAME)

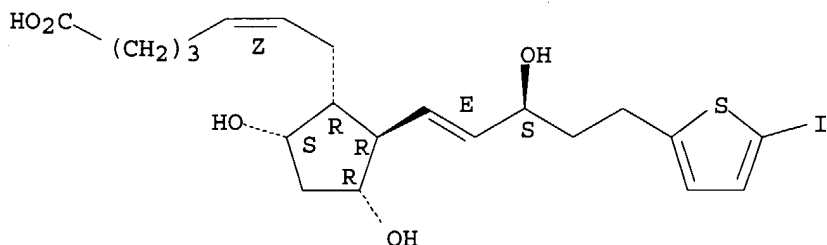
Relative stereochemistry.
Double bond geometry as shown.



RN 225661-34-7 HCAPLUS

CN 5-Heptenoic acid, 7-[(1R,2R,3R,5S)-3,5-dihydroxy-2-[(1E,3S)-3-hydroxy-5-(5-iodo-2-thienyl)-1-pentenyl]cyclopentyl]-, (5Z)-rel- (9CI) (CA INDEX NAME)

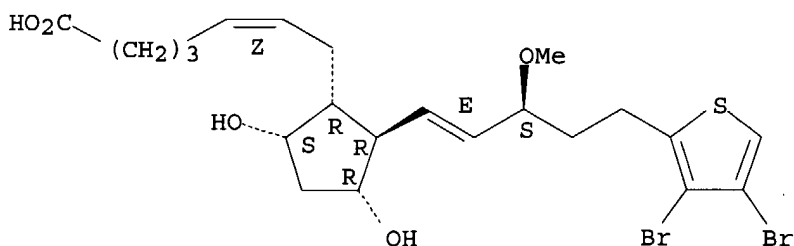
Relative stereochemistry.
Double bond geometry as shown.



RN 225661-39-2 HCAPLUS

CN 5-Heptenoic acid, 7-[(1R,2R,3R,5S)-2-[(1E,3S)-5-(3,4-dibromo-2-thienyl)-3-methoxy-1-pentenyl]-3,5-dihydroxycyclopentyl]-, (5Z)-rel- (9CI) (CA INDEX NAME)

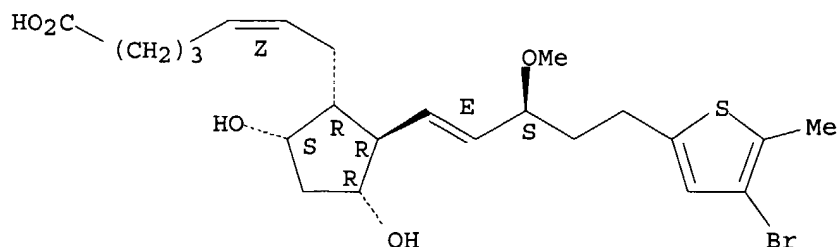
Relative stereochemistry.
Double bond geometry as shown.



RN 225661-44-9 HCAPLUS

CN 5-Heptenoic acid, 7-[(1R,2R,3R,5S)-2-[(1E,3S)-5-(4-bromo-5-methyl-2-thienyl)-3-methoxy-1-pentenyl]-3,5-dihydroxycyclopentyl]-, (5Z)-rel- (9CI) (CA INDEX NAME)

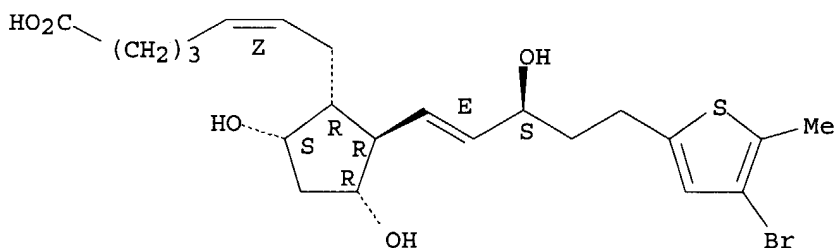
Relative stereochemistry.
Double bond geometry as shown.



RN 225661-46-1 HCAPLUS

CN 5-Heptenoic acid, 7-[(1R,2R,3R,5S)-2-[(1E,3S)-5-(4-bromo-5-methyl-2-thienyl)-3-hydroxy-1-pentenyl]-3,5-dihydroxycyclopentyl]-, (5Z)-rel- (9CI) (CA INDEX NAME)

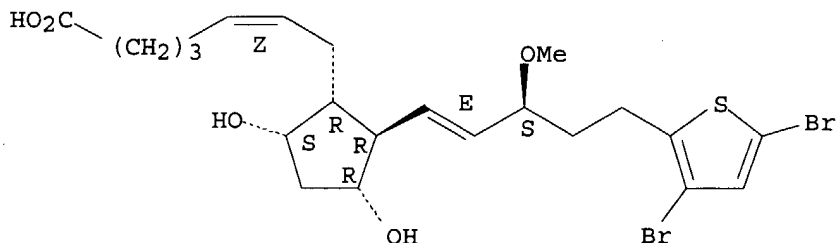
Relative stereochemistry.
Double bond geometry as shown.



RN 225661-48-3 HCAPLUS

CN 5-Heptenoic acid, 7-[(1R,2R,3R,5S)-2-[(1E,3S)-5-(3,5-dibromo-2-thienyl)-3-methoxy-1-pentenyl]-3,5-dihydroxycyclopentyl]-, (5Z)-rel- (9CI) (CA INDEX NAME)

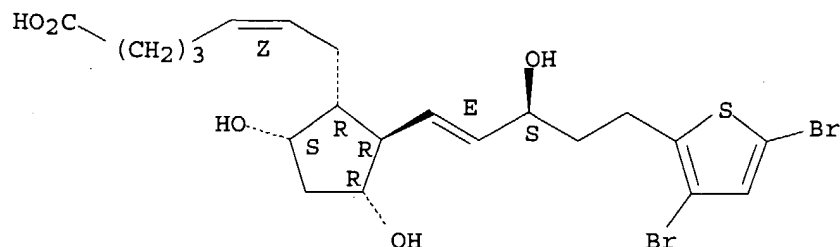
Relative stereochemistry.
Double bond geometry as shown.



RN 225661-51-8 HCAPLUS

CN 5-Heptenoic acid, 7-[(1R,2R,3R,5S)-2-[(1E,3S)-5-(3,5-dibromo-2-thienyl)-3-hydroxy-1-pentenyl]-3,5-dihydroxycyclopentyl]-, (5Z)-rel- (9CI) (CA INDEX NAME)

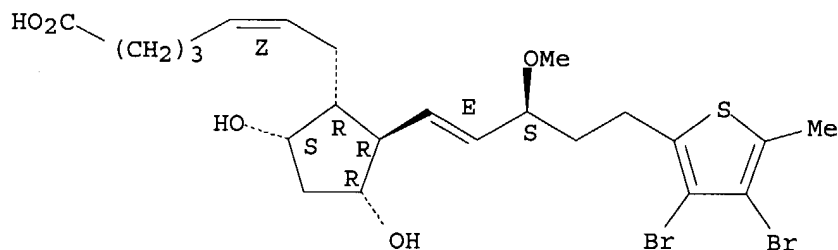
Relative stereochemistry.
Double bond geometry as shown.



RN 225661-52-9 HCAPLUS

CN 5-Heptenoic acid, 7-[(1R,2R,3R,5S)-2-[(1E,3S)-5-(3,4-dibromo-5-methyl-2-thienyl)-3-methoxy-1-pentenyl]-3,5-dihydroxycyclopentyl]-, (5Z)-rel- (9CI)
(CA INDEX NAME)

Relative stereochemistry.
Double bond geometry as shown.



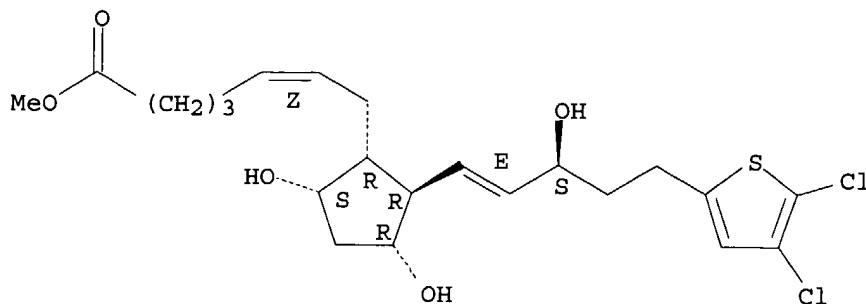
IT 225661-75-6 225661-77-8 225661-79-0
225661-82-5 225661-84-7

RL: RCT (Reactant); RACT (Reactant or reagent)
(preparation of cyclopentane heptan(ene)oic acid, 2-heteroarylalkenyl
derivs. for use as **ocular hypertensive agents**)

RN 225661-75-6 HCAPLUS

CN 5-Heptenoic acid, 7-[(1R,2R,3R,5S)-2-[(1E,3S)-5-(4,5-dichloro-2-thienyl)-3-hydroxy-1-pentenyl]-3,5-dihydroxycyclopentyl]-, methyl ester, (5Z)-rel- (9CI) (CA INDEX NAME)

Relative stereochemistry.
Double bond geometry as shown.

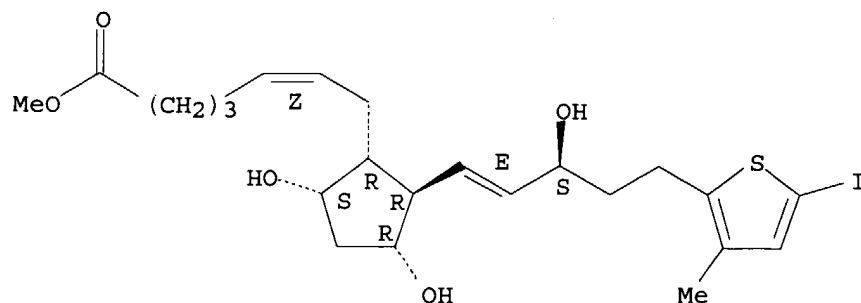


RN 225661-77-8 HCAPLUS

CN 5-Heptenoic acid, 7-[(1R,2R,3R,5S)-3,5-dihydroxy-2-[(1E,3S)-3-hydroxy-5-(5-iodo-3-methyl-2-thienyl)-1-pentenyl]cyclopentyl]-, methyl ester, (5Z)-rel- (9CI) (CA INDEX NAME)

Relative stereochemistry.

Double bond geometry as shown.

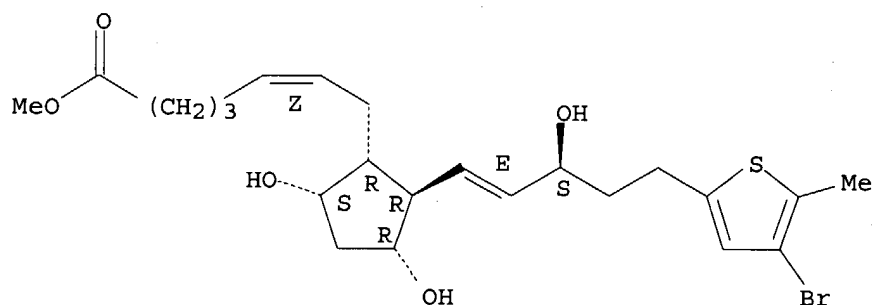


RN 225661-79-0 HCAPLUS

CN 5-Heptenoic acid, 7-[(1R,2R,3R,5S)-2-[(1E,3S)-5-(4-bromo-5-methyl-2-thienyl)-3-hydroxy-1-pentenyl]-3,5-dihydroxycyclopentyl]-, methyl ester, (5Z)-rel- (9CI) (CA INDEX NAME)

Relative stereochemistry.

Double bond geometry as shown.

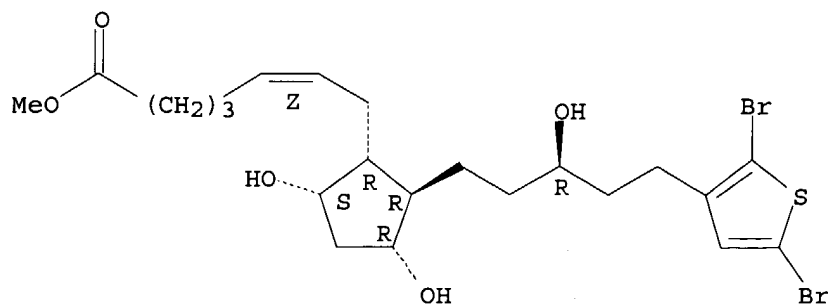


RN 225661-82-5 HCAPLUS

CN 5-Heptenoic acid, 7-[(1R,2R,3R,5S)-2-[(3R)-5-(2,5-dibromo-3-thienyl)-3-hydroxypentenyl]-3,5-dihydroxycyclopentyl]-, methyl ester, (5Z)-rel- (9CI) (CA INDEX NAME)

Relative stereochemistry.

Double bond geometry as shown.

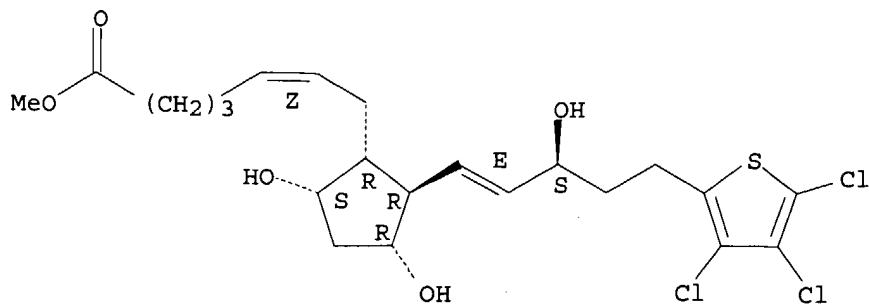


RN 225661-84-7 HCAPLUS

CN 5-Heptenoic acid, 7-[(1R,2R,3R,5S)-3,5-dihydroxy-2-[(1E,3S)-3-hydroxy-5-(3,4,5-trichloro-2-thienyl)-1-pentenyl]cyclopentyl]-, methyl ester, (5Z)-rel- (9CI) (CA INDEX NAME)

Relative stereochemistry.

Double bond geometry as shown.



IT 225661-57-4P 225661-64-3P

RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)

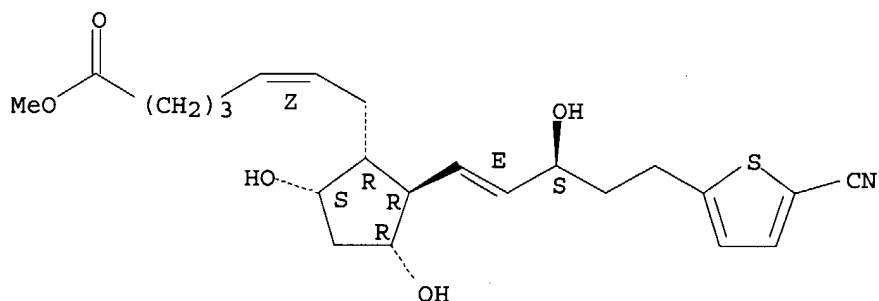
(preparation of cyclopentane heptan(ene)oic acid, 2-heteroarylalkenyl derivs. for use as **ocular hypertensive agents**)

RN 225661-57-4 HCAPLUS

CN 5-Heptenoic acid, 7-[(1R,2R,3R,5S)-2-[(1E,3S)-5-(5-cyano-2-thienyl)-3-hydroxy-1-pentenyl]-3,5-dihydroxycyclopentyl]-, methyl ester, (5Z)-rel- (9CI) (CA INDEX NAME)

Relative stereochemistry.

Double bond geometry as shown.

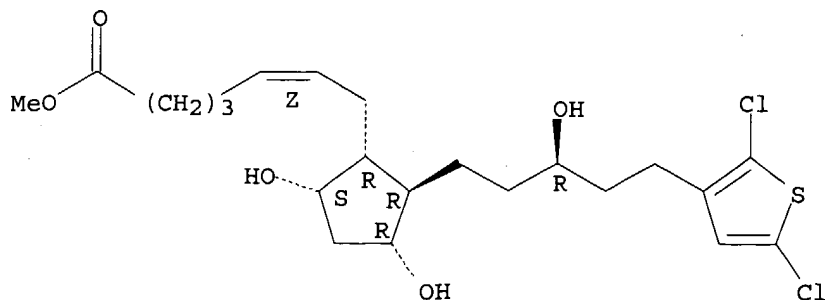


RN 225661-64-3 HCAPLUS

CN 5-Heptenoic acid, 7-[(1R,2R,3R,5S)-2-[(3R)-5-(2,5-dichloro-3-thienyl)-3-hydroxypentyl]-3,5-dihydroxycyclopentyl]-, methyl ester, (5Z)-rel- (9CI) (CA INDEX NAME)

Relative stereochemistry.

Double bond geometry as shown.



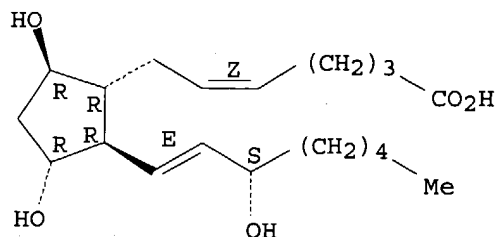
L113 ANSWER 4 OF 10 HCAPLUS COPYRIGHT 2004 ACS on STN
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 DN 130:119579
 ED Entered STN: 01 Feb 1999
 TI Prostaglandin derivatives devoid of side effects for the treatment of
glaucoma
 IN **Stjernschantz, Johan; Resul, Bahram; Lake, Staffan**
 PA Pharmacia & Upjohn AB, Swed.
 SO PCT Int. Appl., 40 pp.
 CODEN: PIXXD2
 DT Patent
 LA English
 IC ICM A61K031-557
 CC 1-1 (Pharmacology)
 Section cross-reference(s): 26

FAN.CNT 1

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	RW:			GH, GM, KE, LS, MW, SD, SZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG	
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	AU 739828	B2	20011018		
	TR 200000008	T2	20000522	TR 2000-200000008	19980710 <--
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	R:			AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO	
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	NZ 501834	A	20020531	NZ 1998-501834	19980710 <--
	RU 2207858	C2	20030710	RU 2000-103224	19980710 <--
PRAI	SE 1997-2706	A	19970711		<--
	WO 1998-SE1368	W	19980710		<--
OS	MARPAT 130:119579				
AB	A new method and compns. for the treatment of glaucoma and ocular hypertension are described. The method is based on the usage of EP1 prostanoid receptor agonists which effectively reduce the intraocular pressure but have no, or reduced effect on iris pigmentation. The prostaglandin analog which is an EP1 selective agonist is applied topically on the eye .				
ST	prostaglandin treatment glaucoma				
IT	Prostanoid receptors				
	RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)				
	(EP1; prostaglandin derivs. devoid of side effects for treatment of glaucoma)				
IT	Antiglaucoma agents				
	Glaucoma (disease)				
	(prostaglandin derivs. devoid of side effects for treatment of glaucoma)				
IT	Prostaglandins				
	RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)				
	(prostaglandin derivs. devoid of side effects for treatment of glaucoma)				

- IT 4510-16-1P, Pg2 β 38315-43-4P 219827-59-5P
 RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); RCT (Reactant); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); RACT (Reactant or reagent); USES (Uses)
 (prostaglandin derivs. devoid of side effects for treatment of glaucoma)
- IT 130225-92-2P 157019-93-7P 219827-55-1P
 219827-63-1P 219827-85-7P 219828-15-6P
 RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)
 (prostaglandin derivs. devoid of side effects for treatment of glaucoma)
- IT 75-30-9, Isopropyl iodide 75-77-4, Trimethylsilyl chloride, reactions
 456-41-7, 3-Fluorobenzyl bromide 688-73-3, Tributyltin hydride
 1195-42-2, N-Isopropylcyclohexylamine 4202-14-6, Dimethyl
 2-oxopropylphosphonate 14924-53-9, Ethyl cyclobutanecarboxylate
 31752-99-5 61305-36-0 149862-39-5
 RL: RCT (Reactant); RACT (Reactant or reagent)
 (prostaglandin derivs. devoid of side effects for treatment of glaucoma)
- IT 38754-71-1P 39990-99-3P 62407-82-3P 62407-83-4P 62407-84-5P
 63295-65-8P 219827-74-4P 219827-77-7P 219827-83-5P 219827-87-9P
 219827-90-4P 219827-93-7P 219827-95-9P 219827-98-2P 219828-01-0P
 219828-04-3P 219828-07-6P 219828-09-8P 219828-13-4P
 RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
 (prostaglandin derivs. devoid of side effects for treatment of glaucoma)
- RE.CNT 5 THERE ARE 5 CITED REFERENCES AVAILABLE FOR THIS RECORD
- RE
- (1) Alcon Laboratories, Inc; WO 9408585 A1 1994 HCAPLUS
 - (2) Bays, D; Natural product reports 1990, V7(5), P409 MEDLINE
 - (3) Kluender, H; US 4132738 A 1979 HCAPLUS
 - (4) Watabe, A; The Journal of Biological Chemistry 1993, V268(27), P20175 HCAPLUS
 - (5) Woodward, D; Journal of Lipid Mediators 1993, V6, P545 HCAPLUS
- IT 4510-16-1P, Pg2 β 38315-43-4P 219827-59-5P
 RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); RCT (Reactant); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); RACT (Reactant or reagent); USES (Uses)
 (prostaglandin derivs. devoid of side effects for treatment of glaucoma)
- RN 4510-16-1 HCAPLUS
- CN Prosta-5,13-dien-1-oic acid, 9,11,15-trihydroxy-,
 (5Z,9 β ,11 α ,13E,15S) - (9CI) (CA INDEX NAME)

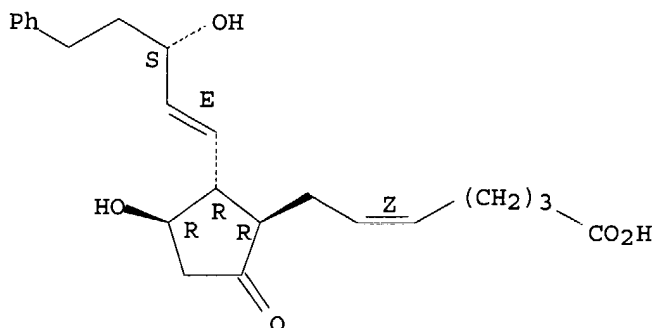
Absolute stereochemistry.
 Double bond geometry as shown.



RN 38315-43-4 HCAPLUS

CN 5-Heptenoic acid, 7-[(1R,2R,3R)-3-hydroxy-2-[(1E,3S)-3-hydroxy-5-phenyl-1-pentenyl]-5-oxocyclopentyl]-, (5Z)- (9CI) (CA INDEX NAME)

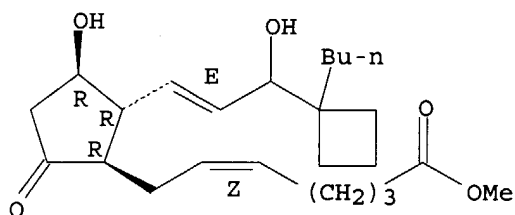
Absolute stereochemistry.
Double bond geometry as shown.



RN 219827-59-5 HCAPLUS

CN 5-Heptenoic acid, 7-[(1R,2R,3R)-2-[(1E)-3-(1-butylcyclobutyl)-3-hydroxy-1-propenyl]-3-hydroxy-5-oxocyclopentyl]-, methyl ester, (5Z)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.
Double bond geometry as shown.

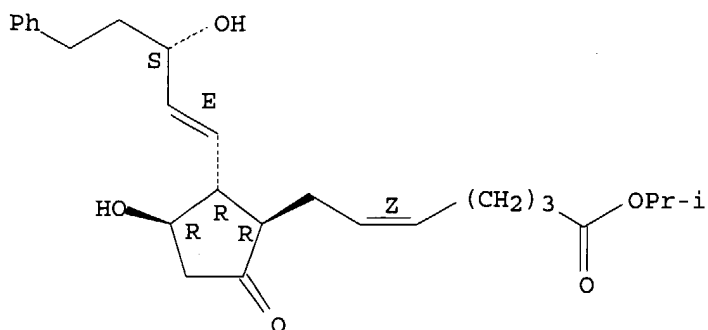
IT 130225-92-2P 157019-93-7P 219827-55-1P
219827-63-1P 219828-15-6P

RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)
(prostaglandin derivs. devoid of side effects for treatment of
glaucoma)

RN 130225-92-2 HCAPLUS

CN 5-Heptenoic acid, 7-[(1R,2R,3R)-3-hydroxy-2-[(1E,3S)-3-hydroxy-5-phenyl-1-pentenyl]-5-oxocyclopentyl]-, 1-methylethyl ester, (5Z)- (9CI) (CA INDEX NAME)

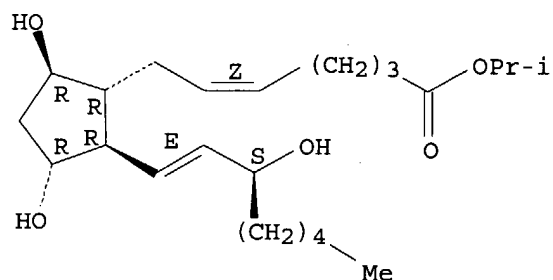
Absolute stereochemistry.
Double bond geometry as shown.



RN 157019-93-7 HCAPLUS

CN Prosta-5,13-dien-1-oic acid, 9,11,15-trihydroxy-, 1-methylethyl ester, (5Z,9β,11α,13E,15S)- (9CI) (CA INDEX NAME)

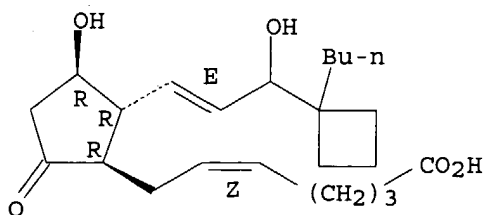
Absolute stereochemistry.
Double bond geometry as shown.



RN 219827-55-1 HCAPLUS

CN 5-Heptenoic acid, 7-[(1R,2R,3R)-2-[(1E)-3-(1-butylcyclobutyl)-3-hydroxy-1-propenyl]-3-hydroxy-5-oxocyclopentyl]-, (5Z)- (9CI) (CA INDEX NAME)

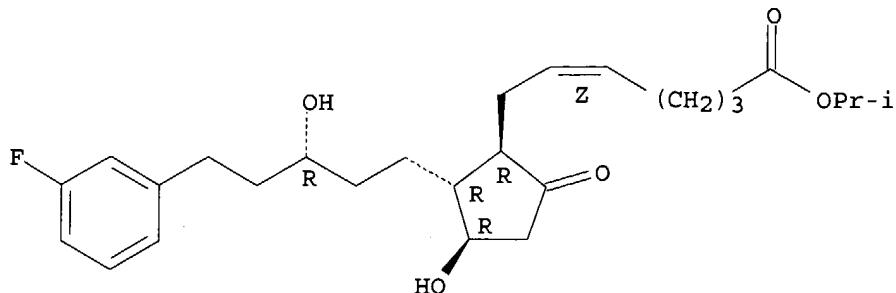
Absolute stereochemistry.
Double bond geometry as shown.



RN 219827-63-1 HCAPLUS

CN 5-Heptenoic acid, 7-[(1R,2R,3R)-2-[(3R)-5-(3-fluorophenyl)-3-hydroxypentyl]-3-hydroxy-5-oxocyclopentyl]-, 1-methylethyl ester, (5Z)- (9CI) (CA INDEX NAME)

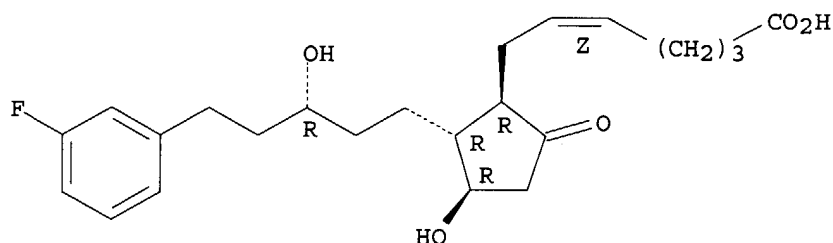
Absolute stereochemistry.
Double bond geometry as shown.



RN 219828-15-6 HCAPLUS

CN 5-Heptenoic acid, 7-[(1R,2R,3R)-2-[(3R)-5-(3-fluorophenyl)-3-hydroxypentyl]-3-hydroxy-5-oxocyclopentyl]-, (5Z)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.
Double bond geometry as shown.



L113 ANSWER 5 OF 10 HCAPLUS COPYRIGHT 2004 ACS on STN

AN 1997:272439 HCAPLUS

DN 126:339206

ED Entered STN: 28 Apr 1997

TI Prostaglandin effects on the contractility of bovine trabecular meshwork and ciliary muscle

AU Krauss, Achim H.-P.; Wiederholt, Michael; Strum, Annette; Woodward, David F.

CS Allergan, Inc., Irvine, CA, 92612, USA

SO Experimental Eye Research (1997), 64(3), 447-453

CODEN: EXERA6; ISSN: 0014-4835

PB Academic

DT Journal

LA English

CC 2-9 (Mammalian Hormones)

AB The **ocular hypotensive** activity of prostaglandins

(PGs) has previously been demonstrated in various species including man.

The underlying mechanism of action of prostanoids other than PGF2 α

remains contentious. Because the trabecular meshwork and ciliary muscle

are believed to have a role in the regulation of aqueous humor outflow, the

aim of this study was to identify the PG-receptor subtypes present in

these tissues using receptor-selective agonists. Contractions of isolated

strips of bovine trabecular meshwork and ciliary muscle were recorded

isometrically in continuously perfused tissue chambers. Contractile

activity of PGs was determined relative to a maximally effective concentration

of

carbachol (1 μ M) as a standard agonist. The following prostanoids were

employed: PGF2 α , 17-Ph PGF2 α (FP-receptor agonists),

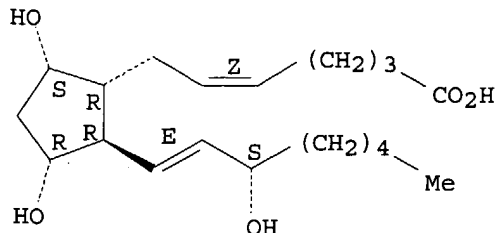
sulprostone (EP3 > EP1-agonist), AH13205 (EP2-agonist), 11-deoxy

PGE1 (non-selective EP-agonist), and U-46619 (TP-agonist). The

thromboxane-mimetic U-46619 elicited a strong contraction of the trabecular meshwork with the highest concentration (1 μ M) being almost twice as efficacious (186.6%) as the maximal carbachol concentration, whereas the effect on the ciliary muscle was small. The U-46619 induced trabecular meshwork contraction could be blocked with a potent and selective TP-receptor antagonist, 1 μ M SQ29548, indicating the involvement of TP-receptors. The other PG-analogs studied had either no or a small but statistically significant effect. Thus, 17-Ph PGF2 α (1 μ M) weakly contracted the ciliary muscle (4.8%), sulprostone (1 μ M) the trabecular meshwork (10.1%). 11-Deoxy PGE1 (1 μ M) and AH13205 (10 μ M) elicited relaxations in both tissues precontracted with carbachol (1 μ M). The relaxant effects were more pronounced in trabecular meshwork (15.6% for 11-deoxy PGE1 and 21.4% for AH13205) than ciliary muscle (6.8 and 7.4% resp.). PGF2 α did not elicit a significant response in either tissue. The studies suggest the existence of TP- and EP2-receptors in the bovine trabecular meshwork and potentially FP- and EP2-receptors in the ciliary muscle. In conclusion, thromboxane-mimetics and EP2-agonists have opposing activities on contractile elements in the meshwork and may modulate trabecular outflow in a functionally antagonistic manner. Prostanoid effects on ciliary muscle appear rather modest compared to parasympathomimetic drugs. It is conceivable that TP-agonists may substantially affect trabecular outflow.

- ST prostaglandin eye ciliary muscle trabecular meshwork; PGF 2alpha eye
 IT Eye
 Eye
 (ciliary muscle; prostaglandin effects on contractility of bovine trabecular meshwork and ciliary muscle)
 IT Muscle
 Muscle
 (ciliary; prostaglandin effects on contractility of bovine trabecular meshwork and ciliary muscle)
 IT Prostaglandins
 RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); BIOL (Biological study)
 (prostaglandin effects on contractility of bovine trabecular meshwork and ciliary muscle)
 IT Thromboxane receptors
 RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)
 (prostaglandin effects on contractility of bovine trabecular meshwork and ciliary muscle)
 IT Eye
 (trabecular meshwork; prostaglandin effects on contractility of bovine trabecular meshwork and ciliary muscle)
 IT 551-11-1, PGF2 α 37786-00-8, 11-Deoxy PGE1
 55582-75-7, 17-Phenyl PGF2 α 56985-40-1, U-46619
 60325-46-4, Sulprostone 148436-63-9, AH13205
 RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); BIOL (Biological study)
 (prostaglandin effects on contractility of bovine trabecular meshwork and ciliary muscle)
 IT 551-11-1, PGF2 α 37786-00-8, 11-Deoxy PGE1
 55582-75-7, 17-Phenyl PGF2 α
 RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); BIOL (Biological study)
 (prostaglandin effects on contractility of bovine trabecular meshwork and ciliary muscle)
 RN 551-11-1 HCAPLUS
 CN Prosta-5,13-dien-1-oic acid, 9,11,15-trihydroxy-,
 (5Z,9 α ,11 α ,13E,15S) - (9CI) (CA INDEX NAME)

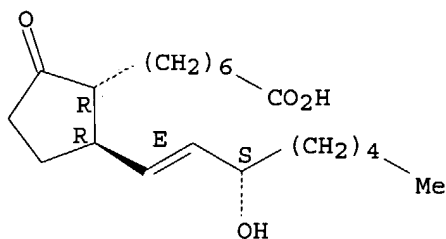
Absolute stereochemistry.
 Double bond geometry as shown.



RN 37786-00-8 HCAPLUS

CN Prost-13-en-1-oic acid, 15-hydroxy-9-oxo-, (13E,15S)- (9CI) (CA INDEX NAME)

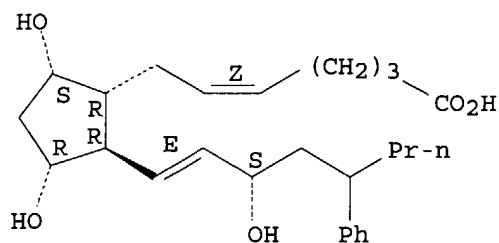
Absolute stereochemistry.
Double bond geometry as shown.



RN 55582-75-7 HCAPLUS

CN Prosta-5,13-dien-1-oic acid, 9,11,15-trihydroxy-17-phenyl-, (5Z,9α,11α,13E,15S)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.
Double bond geometry as shown.



L113 ANSWER 6 OF 10 HCAPLUS COPYRIGHT 2004 ACS on STN

AN 1995:215124 HCAPLUS

DN 122:232

ED Entered STN: 29 Nov 1994

TI Pharmacological characterization of prostaglandin-related **ocular hypotensive** agents

AU Goh, Yasumasa; Kishino, Junji

CS Shionogi Research Laboratories, Toyonaka, 561, Japan

SO Japanese Journal of Ophthalmology (1994), 38(3), 236-45

CODEN: JJOPA7; ISSN: 0021-5155

PB Japanese Journal of Ophthalmology

DT Journal

LA English

CC 1-2 (Pharmacology)

AB The agonistic activity of the prostaglandin (PG)-related **ocular hypotensive** agents, S-1033, UF-021 and PhXA34, to PG receptors was investigated by using in vitro tissue responses and binding of radio-labeled ligands to membranes. UF-021 and PhXA34, which are both 1-iso-Pr esterified forms, were examined mainly in a free acid form. The agonistic activity to PGD2 and PGI2 receptors, examined using inhibition of ADP-induced aggregation of guinea pig platelets, was negligible for all three compds. None showed substantial agonistic activity to TXA2 receptor, as determined from contractions of rat thorax aorta. PhXA34 showed significant **PGE2** agonistic activity. Among the three **PGE2** receptor subtypes, the agonistic activity to **EP1** and **EP2** receptors was about 1/1000 and 1/2000 of **PGE2**, as determined from contraction of guinea pig longitudinal and circular ileum strips, resp. The other two compds. showed little agonistic activity (<1/100 000 of **PGE2**) to these receptors. The agonistic activity to **PGF2 α** receptors, as determined from contraction of cat iris sphincter strips, was substantial for S-1033 and PhXA34, being 1/45 and 1/2 of **PGF2 α** , resp., but weak for UF-021 (1/1600). To further investigate the affinity of the three compds. to **PGE2** and **PGF2 α** receptors, inhibition of [**3H**]**PGE2**.alpha. binding was examined with membrane fractions of bovine adrenal medulla which possesses **EP3** type **PGE2** receptors and bovine corpus luteum which has **PGF2 α** receptors. The activity of PhXA34 for inhibiting [**3H**]**PGE2** binding was about 1/2000 of **PGE2**. S-1033 and UF-021 did not significantly inhibit [**3H**]**PGE2** binding within the range examined (<<1/2000 of **PGE2**). The activity to inhibit [**3H**]**PGF2 α** binding was strong for PhXA34 (about the same as that of **PGF2 α**), while the activity for S-1033 and UF-021 was about 1/34 and <1/280 of **PGF2 α** , resp. These results indicate that the specificity to **PGF2 α** receptor is the highest for S-1033 followed by PhXA34 although the activity to this receptor is stronger for the latter compound UF-021 has only a weak agonistic activity to **PGF2 α** receptors.

ST S1033 UF021 PhXA34 prostaglandin thromboxane receptor; **eye hypotensive** S1033 UF021 PhXA34 prostaglandin

IT Prostaglandin receptors
Thromboxane receptors
RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)
(**ocular hypotensive** agents S-1033, UF-021, and PhXA34 agonistic activity to prostaglandin and thromboxane receptors)

IT **Glaucoma (disease)**
(**ocular hypotensive** agents S-1033, UF-021, and PhXA34 agonistic activity to prostaglandin and thromboxane receptors in relation to **glaucoma** treatment)

IT Receptors
RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)
(prostaglandin, **ocular hypotensive** agents S-1033, UF-021, and PhXA34 agonistic activity to prostaglandin and thromboxane receptors)

IT Receptors
RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)
(thromboxane, **ocular hypotensive** agents S-1033, UF-021, and PhXA34 agonistic activity to prostaglandin and thromboxane receptors)

IT 120373-24-2, UF-021 138282-73-2, S-1033
155551-81-8, PhXA34
RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); BIOL (Biological study)
(**ocular hypotensive** agents S-1033, UF-021, and PhXA34 agonistic activity to prostaglandin and thromboxane receptors)

IT 120373-24-2, UF-021 138282-73-2, S-1033

155551-81-8, PhXA34

RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); BIOL (Biological study)

(ocular hypotensive agents S-1033, UF-021, and

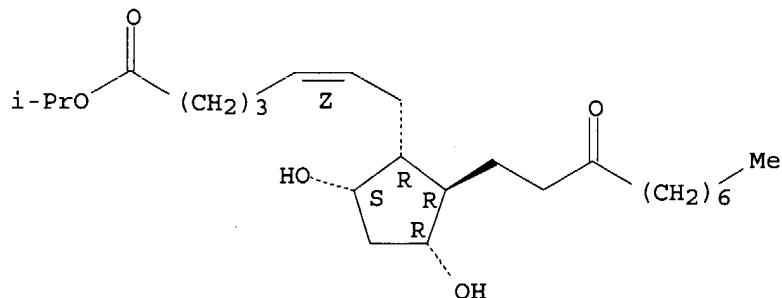
PhXA34 agonistic activity to prostaglandin and thromboxane receptors)

RN 120373-24-2 HCAPLUS

CN 5-Heptenoic acid, 7-[(1R,2R,3R,5S)-3,5-dihydroxy-2-(3-oxodecyl)cyclopentyl]-, 1-methylethyl ester, (5Z)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.

Double bond geometry as shown.

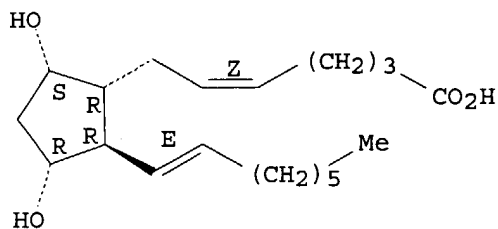


RN 138282-73-2 HCAPLUS

CN Prosta-5,13-dien-1-oic acid, 9,11-dihydroxy-, monosodium salt, (5Z,9α,11α,13E)- (9CI) (CA INDEX NAME)

Absolute stereochemistry. Rotation (+).

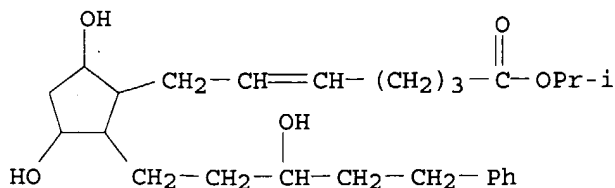
Double bond geometry as shown.



● Na

RN 155551-81-8 HCAPLUS

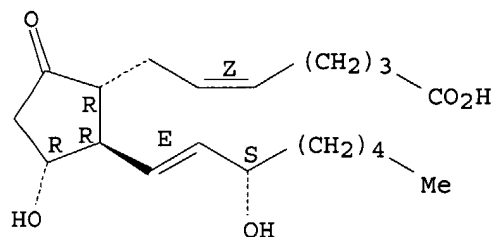
CN 5-Heptenoic acid, 7-[3,5-dihydroxy-2-(3-hydroxy-5-phenylpentyl)cyclopentyl]-, 1-methylethyl ester (9CI) (CA INDEX NAME)



DN 120:290654
ED Entered STN: 11 Jun 1994
TI Studies on the **ocular hypotensive** effects of
prostaglandin F2 α prodrugs and receptor selective prostaglandin
analogs
AU Woodward, David F.; Chan, M. F.; Burke, J. A.; Cheng-Bennett, A.; Chen,
G.; Fairbairn, C. E.; Gac, T.; Garst, M. E.; Gluchowski, C.; et al.
CS Dep. Biochem., Allergan, Inc., Irvine, CA, USA
SO Journal of Ocular Pharmacology (1994), 10(1), 177-93
CODEN: JOPHER; ISSN: 8756-3320
DT Journal
LA English
CC 2-9 (Mammalian Hormones)
AB The use of natural prostaglandins (PG), such as PGD2, **PGE2**,
PGF2 α , and PGI2, for treating **glaucoma** is limited by their
ocular side effects. One approach to achieve the required separation
of **ocular hypotensive** activity from side effects is to
employ ester prodrugs. From a novel series of 11- and 15-mono and
11,15-diacyl esters of PGF2 α the authors identified prodrugs where
PGF2 α formation rates in the iris-ciliary body exceeded those in the
conjunctiva, sclera, and corneal endothelium. Compared to
PGF2 α -1-iso-Pr ester the **ocular** tissue hydrolysis rates of
the 11-monopivaloyl, the 11,15-dipivaloyl ester and the 1,11-lactone were
 ≤ 1000 -fold less. Despite this large disparity in hydrolysis rates,
the pivaloyl esters and the 1,11-lactone were potent **ocular**
hypotensives in the authors' animal models. In studying
prostaglandin analogs, the authors found that a diverse variety of
prostanoid receptor selective agonists lowered **intraocular**
pressure in dogs and/or monkeys. These included DP-, **EP1**-,
EP2-, EP3-, and FP-receptor-selective compds. The receptor selectivity of
these agonists was reexamd. by radioligand binding studies. Using
radiolabeled **PGE2**, 17-Ph PGF2 α , and sulprostone the
authors were able to confirm the selectivity of the agonists currently
used for receptor characterization directly by radioligand binding
competition studies. It appears that multiple prostanoid receptor
subtypes may be involved in regulating **intraocular** pressure.
ST prostanoid receptor subtype **intraocular** pressure; PGF 2alpha
prodrug **ocular hypotensive**
IT Eye, metabolism
(conjunctiva, PGF2 α formation from ester prodrugs in)
IT Eye, metabolism
(cornea, epithelium, PGF2 α formation from ester prodrugs in)
IT Eye, metabolism
(cornea, stroma, PGF2 α formation from ester prodrugs in)
IT **Eye**
(**intraocular** fluid, PGF2 α prodrugs **hypotensive**
effect on)
IT Eye, metabolism
(iris-ciliary body, PGF2 α formation from ester prodrugs in)
IT Uterus, composition
(myometrium, prostanoid receptors of, prostanoid ligands interaction
with)
IT Receptors
RL: BIOL (Biological study)
(prostaglandin, subtypes, of ocular tissues, intraocular pressure
modulation by)
IT Prostaglandins
RL: BIOL (Biological study)
(receptors, subtypes, of ocular tissues, intraocular pressure
modulation by)
IT **363-24-6**, **PGE2 40666-16-8**, Fluprostenol
41598-07-6, PGD2 **60972-43-2**, MB 28767 148436-63-9, AH 13205
RL: BIOL (Biological study)

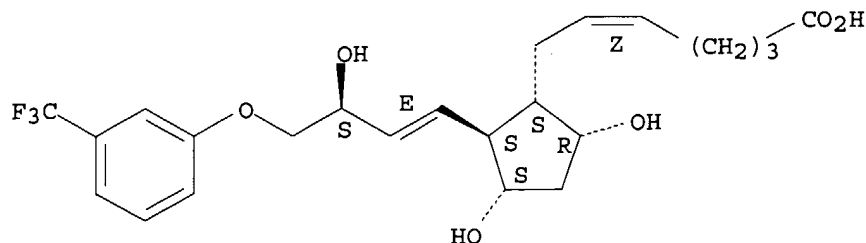
(myometrium prostanoid receptors interaction with)
 IT 37786-00-8, 11-Deoxy PGE1 53764-90-2 55314-48-2,
 PGF2 α 1,9-lactone 55314-49-3, PGF2 α 1,15-lactone
 55582-75-7, 17-Phenyl PGF2 α 56985-40-1, U 46619
 60325-46-4, Sulprostone 62410-84-8, PGF2 α 1,11-lactone
 134217-11-1 135273-39-1 135273-43-7
 137143-41-0 154887-01-1 154887-02-2
 RL: PRP (Properties)
 (ocular hypotensive effect of)
 IT 551-11-1, PGF2 α
 RL: BIOL (Biological study)
 (prodrug hydrolysis to, in eye, ocular
 hypotensive effect of)
 IT 363-24-6, PGE2 40666-16-8, Fluprostenol
 60972-43-2, MB 28767
 RL: BIOL (Biological study)
 (myometrium prostanoid receptors interaction with)
 RN 363-24-6 HCAPLUS
 CN Prosta-5,13-dien-1-oic acid, 11,15-dihydroxy-9-oxo-,
 (5Z,11 α ,13E,15S)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.
 Double bond geometry as shown.



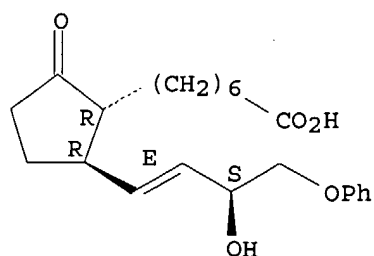
RN 40666-16-8 HCAPLUS
 CN 5-Heptenoic acid, 7-[(1R,2R,3R,5S)-3,5-dihydroxy-2-[(1E,3R)-3-hydroxy-4-[3-(trifluoromethyl)phenoxy]-1-butenyl]cyclopentyl]-, (5Z)-rel- (9CI) (CA INDEX NAME)

Relative stereochemistry.
 Double bond geometry as shown.



RN 60972-43-2 HCAPLUS
 CN Cyclopentaneheptanoic acid, 2-[(1E,3R)-3-hydroxy-4-phenoxy-1-butenyl]-5-oxo-, (1S,2S)-rel- (9CI) (CA INDEX NAME)

Relative stereochemistry.
 Double bond geometry as shown.



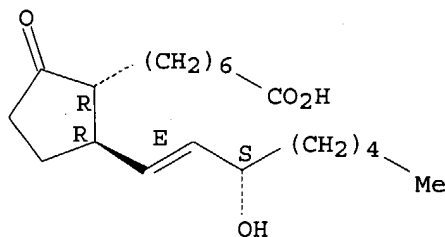
IT 37786-00-8, 11-Deoxy PGE1 53764-90-2 55582-75-7
 , 17-Phenyl PGF2 α 134217-11-1 135273-39-1
 135273-43-7

RL: PRP (Properties)
 (ocular hypotensive effect of)

RN 37786-00-8 HCAPLUS

CN Prost-13-en-1-oic acid, 15-hydroxy-9-oxo-, (13E,15S)- (9CI) (CA INDEX NAME)

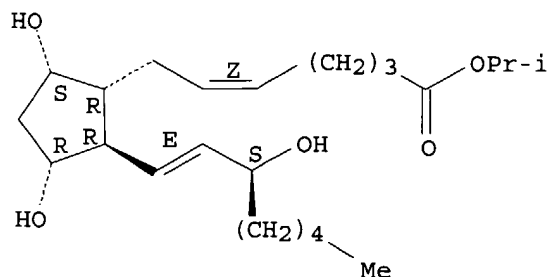
Absolute stereochemistry.
 Double bond geometry as shown.



RN 53764-90-2 HCAPLUS

CN Prosta-5,13-dien-1-oic acid, 9,11,15-trihydroxy-, 1-methylethyl ester,
 (5Z,9 α ,11 α ,13E,15S)- (9CI) (CA INDEX NAME)

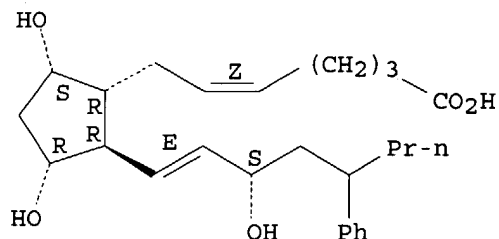
Absolute stereochemistry.
 Double bond geometry as shown.



RN 55582-75-7 HCAPLUS

CN Prosta-5,13-dien-1-oic acid, 9,11,15-trihydroxy-17-phenyl-,
 (5Z,9 α ,11 α ,13E,15S)- (9CI) (CA INDEX NAME)

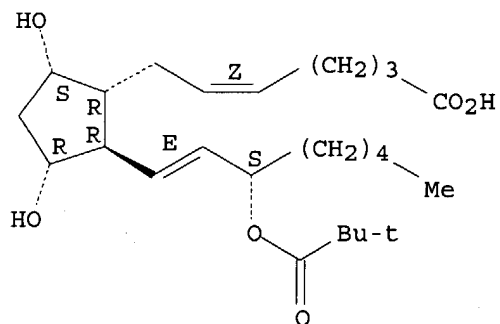
Absolute stereochemistry.
 Double bond geometry as shown.



RN 134217-11-1 HCAPLUS

CN Prosta-5,13-dien-1-oic acid, 15-(2,2-dimethyl-1-oxopropoxy)-9,11-dihydroxy-, (5Z,9 α ,11 α ,13E,15S)- (9CI) (CA INDEX NAME)

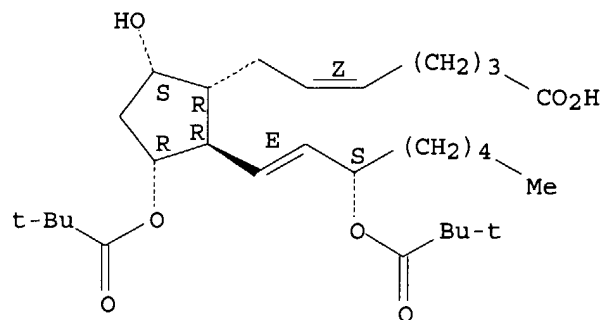
Absolute stereochemistry.
Double bond geometry as shown.



RN 135273-39-1 HCAPLUS

CN Prosta-5,13-dien-1-oic acid, 11,15-bis(2,2-dimethyl-1-oxopropoxy)-9-hydroxy-, (5Z,9 α ,11 α ,13E,15S)- (9CI) (CA INDEX NAME)

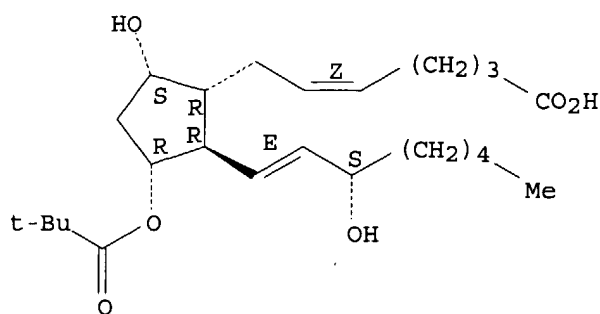
Absolute stereochemistry.
Double bond geometry as shown.



RN 135273-43-7 HCAPLUS

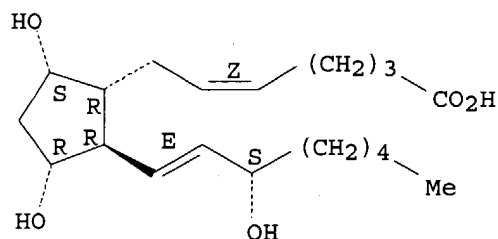
CN Prosta-5,13-dien-1-oic acid, 11-(2,2-dimethyl-1-oxopropoxy)-9,15-dihydroxy-, (5Z,9 α ,11 α ,13E,15S)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.
Double bond geometry as shown.



IT 551-11-1, PGF2α
 RL: BIOL (Biological study)
 (prodrug hydrolysis to, in eye, ocular
 hypotensive effect of)
 RN 551-11-1 HCAPLUS
 CN Prosta-5,13-dien-1-oic acid, 9,11,15-trihydroxy-,
 (5Z,9α,11α,13E,15S)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.
 Double bond geometry as shown.

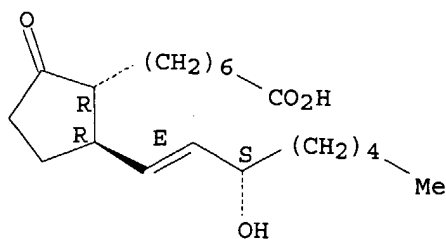


L113 ANSWER 8 OF 10 HCAPLUS COPYRIGHT 2004 ACS on STN
 AN 1993:596454 HCAPLUS
 DN 119:196454
 ED Entered STN: 13 Nov 1993
 TI Intraocular pressure effects of selective prostanoid receptor agonists
 involve different receptor subtypes according to radioligand binding
 studies
 AU Woodward, David F.; Lawrence, Ruth A.; Fairbairn, Casey E.; Shan, Tanwir;
 Williams, Linda S.
 CS Dep. Biol. Sci., Allergan, Inc., Irvine, CA, 92713-9534, USA
 SO Journal of Lipid Mediators (1993), 6(1-3), 545-53
 CODEN: JLMEEG; ISSN: 0921-8319
 DT Journal
 LA English
 CC 2-9 (Mammalian Hormones)
 AB The receptors involved in the ocular hypotensive
 activity PGE2 and PGF2α in dogs and monkeys were
 investigated by examining the effects of putative receptor selective agonists
 on intraocular pressure. A diverse variety of receptor
 selective agonists lowered intraocular pressure in these
 species. Thus, FP-receptor agonists (17-Ph PGF2α, fluprostenol),
 agonists with potent activity at the EP3 receptor (MB 28767, sulprostone)
 and a prostanoid with activity at the EP2 receptor (11-deoxy PGE1) were
 all potent ocular hypotensives when administered as a
 single dose to dogs and monkeys or b.i.d. for 5 days in monkeys. These
 findings were regarded as surprising and prompted re-exam. of some aspects

of the current classification for prostanoid receptors. At present certain receptor subtypes, notably EP2, EP3, and FP receptors, are defined only according to potency rank order for agonists. In these studies, the authors employed radioligand binding studies to determine the degree of competition between prostanoid agonists claimed to be selective on the basis of functional assays. Competition studies with the myometrial plasma membrane prepared from the rat uterus were consistent with the presence of an EP3 receptor. Thus, EP3-receptor agonists (MB 28767 and sulprostone) potently inhibited PGE2 and sulprostone binding, whereas FP agonists (17-Ph PGF2 α , fluprostenol), a DP agonist (BW 245C), an EP1 antagonist (AH 6809), and EP2 agonist (AH 13205) and TP-receptor ligands (BM 13505, I-BOP) afforded little or no inhibition. Radioligand binding studies in plasma membrane preps. from the rat colon with 17-Ph [3H]PGF2 α were consistent with the presence of an FP-receptor. 17-Ph [3H]PGF2 α was potently displaced by PGF2 α , whereas only very weak competition at the receptor site was afforded by EP3 agonists (MB 28767, sulprostone). The results are consistent with the existence of EP3 and FP receptors as distinct entities. The findings also imply that the decrease in intraocular pressure produced by FP and EP3 agonists results from stimulation of two independent subpopulations of prostanoid receptors.

ST eye intraocular pressure prostaglandin receptor agonist
 IT Eye
 (intraocular pressure of, prostaglandin receptor subtypes in regulation of)
 IT Prostaglandins
 RL: BIOL (Biological study)
 (EP3 receptors, in eye intraocular pressure regulation)
 IT Prostaglandins
 RL: BIOL (Biological study)
 (FP receptors, in eye intraocular pressure regulation)
 IT Receptors
 RL: BIOL (Biological study)
 (prostaglandin EP3, in eye intraocular pressure regulation)
 IT Receptors
 RL: BIOL (Biological study)
 (prostaglandin FP, in eye intraocular pressure regulation)
 IT 37786-00-8, 11-Deoxy PGE1 40666-16-8, Fluprostenol
 55582-75-7, 17-Phenyl PGF2 α 60325-46-4, Sulprostone
 60972-43-2, MB 28767
 RL: BIOL (Biological study)
 (eye intraocular pressure decrease by)
 IT 37786-00-8, 11-Deoxy PGE1 40666-16-8, Fluprostenol
 55582-75-7, 17-Phenyl PGF2 α 60972-43-2, MB 28767
 RL: BIOL (Biological study)
 (eye intraocular pressure decrease by)
 RN 37786-00-8 HCAPLUS
 CN Prost-13-en-1-oic acid, 15-hydroxy-9-oxo-, (13E,15S)- (9CI) (CA INDEX NAME)

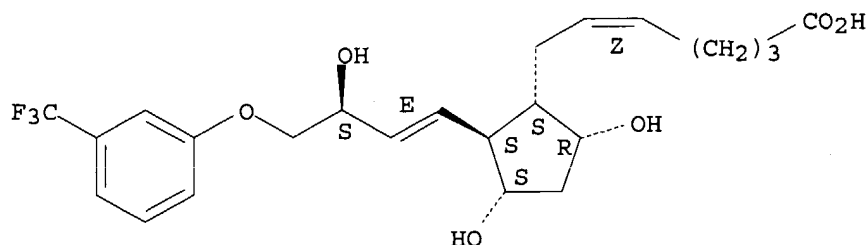
Absolute stereochemistry.
 Double bond geometry as shown.



RN 40666-16-8 HCAPLUS

CN 5-Heptenoic acid, 7-[(1R,2R,3R,5S)-3,5-dihydroxy-2-[(1E,3R)-3-hydroxy-4-[3-(trifluoromethyl)phenoxy]-1-butenyl]cyclopentyl]-, (5Z)-rel- (9CI) (CA INDEX NAME)

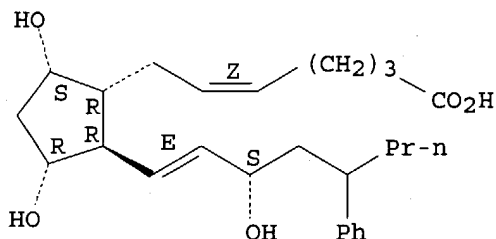
Relative stereochemistry.
Double bond geometry as shown.



RN 55582-75-7 HCAPLUS

CN Prosta-5,13-dien-1-oic acid, 9,11,15-trihydroxy-17-phenyl-, (5Z,9 α ,11 α ,13E,15S)- (9CI) (CA INDEX NAME)

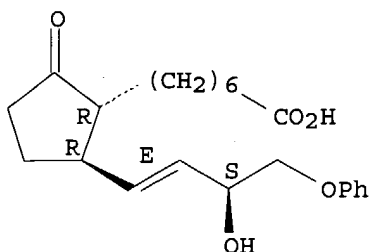
Absolute stereochemistry.
Double bond geometry as shown.



RN 60972-43-2 HCAPLUS

CN Cyclopentaneheptanoic acid, 2-[(1E,3R)-3-hydroxy-4-phenoxy-1-butenyl]-5-oxo-, (1S,2S)-rel- (9CI) (CA INDEX NAME)

Relative stereochemistry.
Double bond geometry as shown.



L113 ANSWER 9 OF 10 HCAPLUS COPYRIGHT 2004 ACS on STN

AN 1990:605515 HCAPLUS

DN 113:205515

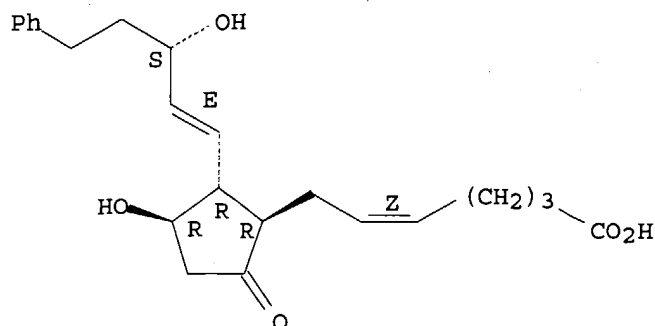
ED Entered STN: 08 Dec 1990

TI Preparation and use of prostaglandin derivatives for the treatment of
glaucoma or ocular hypertension

	JP 08109132	A2	19960430	JP 1995-241200	19950920 <--
	JP 2955213	B2	19991004		
	US 6030999	A	20000229	US 1999-307814	19990510 <--
	US 6187813	B1	20010213	US 1999-307813	19990510 <--
	US 6429226	B1	20020806	US 2000-562447	20000501 <--
	US 2001014693	A1	20010816	US 2001-781896	20010212 <--
	US 6417230	B2	20020709		
	US 2002173525	A1	20021121	US 2002-106228	20020327 <--
	US 2003166729	A1	20030904	US 2002-288732	20021105 <--
	US 2003181493	A1	20030925	US 2002-330846	20021227 <--
PRAI	SE 1988-3110	A	19880906	<--	
	SE 1988-3855	A	19881028	<--	
	EP 1989-850294	A	19890906	<--	
	EP 1993-109514	A3	19890906	<--	
	EP 2002-9256	A3	19890906	<--	
	EP 2003-516	A3	19890906	<--	
	JP 1995-241200	A3	19890906	<--	
	WO 1989-SE475	A	19890906	<--	
	US 1990-469442	B1	19900410	<--	
	US 1991-740371	B1	19910724	<--	
	US 1992-986943	A3	19921208	<--	
	US 1992-988389	A1	19921208	<--	
	US 1995-461341	A1	19950605	<--	
	US 1999-307813	A1	19990510		
	US 2001-781896	A1	20010212		
	US 2002-106228	A1	20020327		
OS	MARPAT 113:205515				
AB	<p>Ophthalmol. comps. for topical treatment of glaucoma or ocular hypertension comprise, in an ophthalmol. compatible carrier, an effective amount of a derivative of PGA, PGB, PGD, PGE, or PGF having an ω-chain C13BC14DR2 [B is a single, double, or triple bond between C13 and C14; D = (un)substituted C1-10 chain optionally interrupted by O, S, or N; R2 = (un)substituted ring]. Thus, crude 15-(R,S)-17-phenyl-18,19,20-trinor-PGF2α (preparation given) was esterified and purified by column chromatog. to give 15-(R)-17-phenyl-18,19,20-trinor-PGF2α isopropyl ester (I) in 46% yield. I (10 μg) reduced intraocular pressure in healthy human volunteers to 11.2 mm Hg 8 h after administration (control = 15.1 mm Hg at 8 h). I and other prepared prostaglandin derivs. all significantly reduced intraocular pressure without significant irritating effect (ocular discomfort); 2 of the derivs. caused little, if any, conjunctival/episcleral hyperemia in man.</p>				
ST	prostaglandin deriv glaucoma treatment; PGF deriv glaucoma treatment				
IT	Glaucoma (disease)				
	(treatment of, with prostaglandin derivs.)				
IT	Prostaglandins				
	RL: PREP (Preparation)				
	(A, 18,19,20-trinor-, 13,14-dihydro-17-Ph, alkyl esters, preparation of, for glaucoma treatment)				
IT	Prostaglandins				
	RL: PREP (Preparation)				
	(A, 18,19,20-trinor-, 15-dehydro-17-Ph, alkyl esters, preparation of, for glaucoma treatment)				
IT	Prostaglandins				
	RL: PREP (Preparation)				
	(E, 18,19,20-trinor-, 13,14-dihydro-17-Ph, alkyl esters, preparation of, for glaucoma treatment)				
IT	Prostaglandins				
	RL: PREP (Preparation)				
	(E, 18,19,20-trinor-, 15-dehydro-17-Ph, alkyl esters, preparation of, for glaucoma treatment)				
IT	Prostaglandins				

- RL: PREP (Preparation)
(F, 18,19,20-trinor-, 13,14-dihydro-17-Ph, alkyl esters, preparation of, for **glaucoma** treatment)
- IT Prostaglandins
RL: PREP (Preparation)
(F, 18,19,20-trinor-, 15-dehydro-17-Ph, alkyl esters, preparation of, for **glaucoma** treatment)
- IT 38315-43-4, 17-Phenyl-18,19,20-trinor **PGE2**
38315-48-9 38344-08-0 51705-19-2
RL: RCT (Reactant); RACT (Reactant or reagent)
(esterification of, in preparation of prostaglandin derivative for **glaucoma** treatment)
- IT 38754-71-1P 41639-72-9P 52343-56-3P 88257-37-8P 130209-85-7P
130273-88-0P 130273-89-1P 130273-90-4P
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(preparation and reaction of, in prostaglandin derivative preparation for **glaucoma** treatment)
- IT 130209-75-5P 130209-76-6P 130209-77-7P
130209-78-8P 130209-79-9P 130209-81-3P
130209-82-4P 130209-83-5P 130209-84-6P
130225-92-2P 130273-87-9P
RL: PREP (Preparation)
(preparation of, for **glaucoma** treatment)
- IT 31752-99-5 130209-80-2
RL: RCT (Reactant); RACT (Reactant or reagent)
(reaction of, in preparation of prostaglandin derivative for **glaucoma** treatment)
- IT 41162-19-0, Dimethyl-2-oxo-4-phenylbutyl phosphonate 52344-42-0
61263-11-4, Dimethyl-2-oxo-6-phenyl-hexylphosphonate
RL: RCT (Reactant); RACT (Reactant or reagent)
(reaction of, in prostaglandin derivative preparation for **glaucoma** treatment)
- IT 75-30-9, Isopropyl iodide 41029-44-1, Isopropyl triflate
RL: RCT (Reactant); RACT (Reactant or reagent)
(reaction of, with prostaglandin, in prostaglandin derivative preparation for **glaucoma** treatment)
- IT 38315-43-4, 17-Phenyl-18,19,20-trinor **PGE2**
38315-48-9 38344-08-0 51705-19-2
RL: RCT (Reactant); RACT (Reactant or reagent)
(esterification of, in preparation of prostaglandin derivative for **glaucoma** treatment)
- RN 38315-43-4 HCAPLUS
CN 5-Heptenoic acid, 7-[(1R,2R,3R)-3-hydroxy-2-[(1E,3S)-3-hydroxy-5-phenyl-1-pentenyl]-5-oxocyclopentyl]-, (5Z)- (9CI) (CA INDEX NAME)

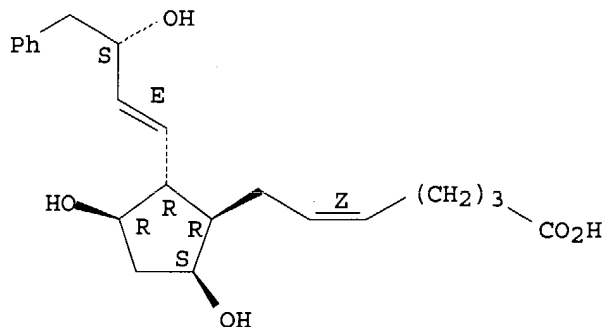
Absolute stereochemistry.
Double bond geometry as shown.



RN 38315-48-9 HCAPLUS

CN 5-Heptenoic acid, 7-[(1R,2R,3R,5S)-3,5-dihydroxy-2-[(1E,3S)-3-hydroxy-4-phenyl-1-butenyl]cyclopentyl]-, (5Z)- (9CI) (CA INDEX NAME)

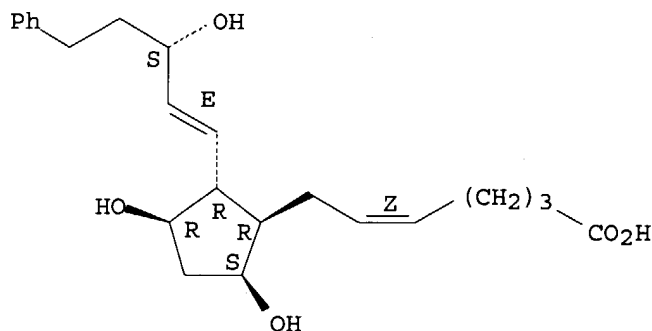
Absolute stereochemistry.
Double bond geometry as shown.



RN 38344-08-0 HCAPLUS

CN 5-Heptenoic acid, 7-[(1R,2R,3R,5S)-3,5-dihydroxy-2-[(1E,3S)-3-hydroxy-5-phenyl-1-pentenyl]cyclopentyl]-, (5Z)- (9CI) (CA INDEX NAME)

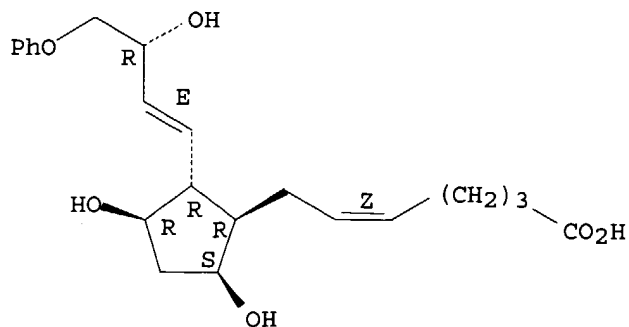
Absolute stereochemistry.
Double bond geometry as shown.



RN 51705-19-2 HCAPLUS

CN 5-Heptenoic acid, 7-[(1R,2R,3R,5S)-3,5-dihydroxy-2-[(1E,3R)-3-hydroxy-4-phenoxy-1-butenyl]cyclopentyl]-, (5Z)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.
Double bond geometry as shown.



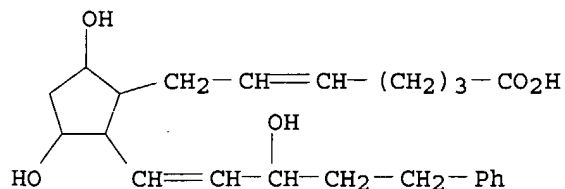
IT 130273-90-4P

RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)

(preparation and reaction of, in prostaglandin derivative preparation for **glaucoma** treatment)

RN 130273-90-4 HCAPLUS

CN 5-Heptenoic acid, 7-[3,5-dihydroxy-2-(3-hydroxy-5-phenyl-1-pentenyl)cyclopentyl]- (9CI) (CA INDEX NAME)



IT 130209-75-5P 130209-76-6P 130209-77-7P

130209-78-8P 130209-81-3P 130209-82-4P

130209-83-5P 130209-84-6P 130225-92-2P

130273-87-9P

RL: PREP (Preparation)

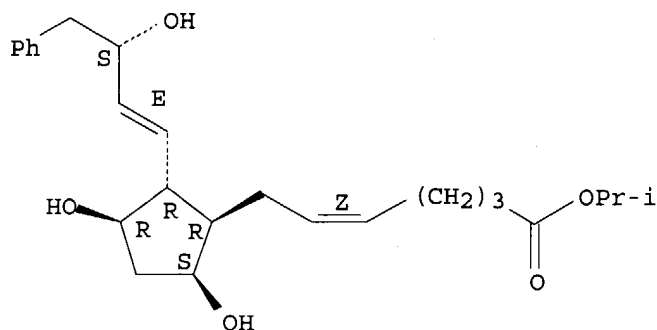
(preparation of, for **glaucoma** treatment)

RN 130209-75-5 HCAPLUS

CN 5-Heptenoic acid, 7-[3,5-dihydroxy-2-(3-hydroxy-4-phenyl-1-butenyl)cyclopentyl]-, 1-methylethyl ester, [1R-[1 α (Z), 2 β (1E, 3S*), 3 α , 5 α]]- (9CI) (CA INDEX NAME)

Absolute stereochemistry.

Double bond geometry as shown.

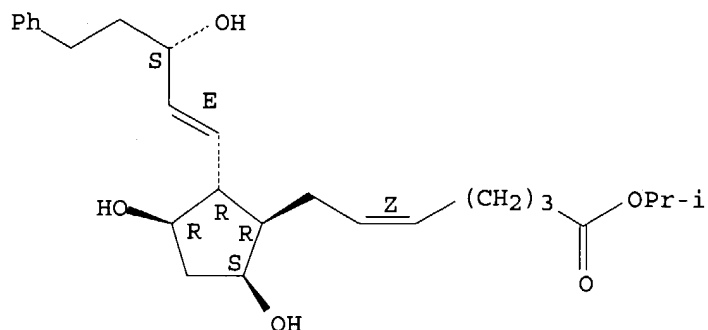


RN 130209-76-6 HCAPLUS

CN 5-Heptenoic acid, 7-[(1R,2R,3R,5S)-3,5-dihydroxy-2-[(1E,3S)-3-hydroxy-5-phenyl-1-pentenyl]cyclopentyl]-, 1-methylethyl ester, (5Z)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.

Double bond geometry as shown.

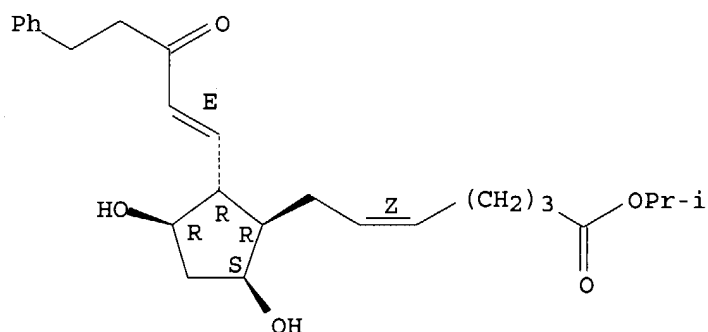


RN 130209-77-7 HCAPLUS

CN 5-Heptenoic acid, 7-[(1R,2R,3R,5S)-3,5-dihydroxy-2-[(1E)-3-oxo-5-phenyl-1-pentenyl]cyclopentyl]-, 1-methylethyl ester, (5Z)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.

Double bond geometry as shown.

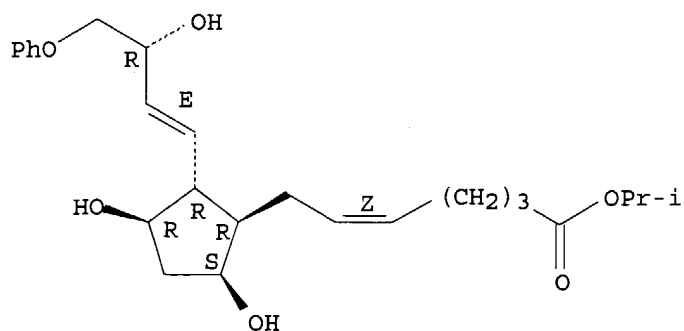


RN 130209-78-8 HCAPLUS

CN 5-Heptenoic acid, 7-[3,5-dihydroxy-2-(3-hydroxy-4-phenoxy-1-butenyl)cyclopentyl]-, 1-methylethyl ester, [1R-[1 α (Z),2 β (1E,3R*),3 α ,5 α]]- (9CI) (CA INDEX NAME)

Absolute stereochemistry.

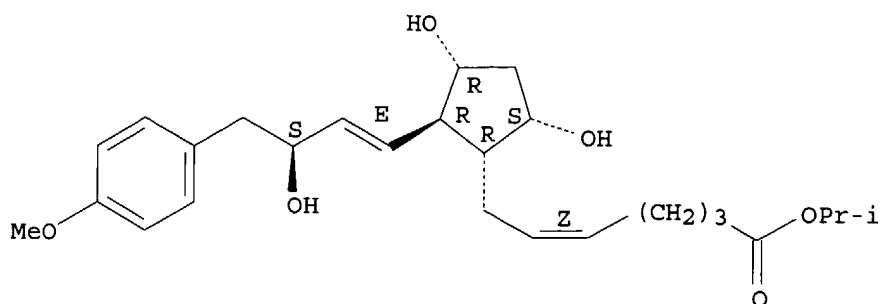
Double bond geometry as shown.



RN 130209-81-3 HCAPLUS

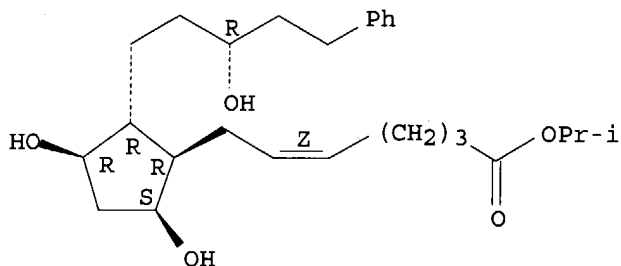
CN 5-Heptenoic acid, 7-[3,5-dihydroxy-2-[3-hydroxy-4-(4-methoxyphenyl)-1-butenyl]cyclopentyl]-, 1-methylethyl ester, [1R-[1 α (Z),2 β (1E,3S*),3 α ,5 α]]- (9CI) (CA INDEX NAME)

Absolute stereochemistry.
Double bond geometry as shown.



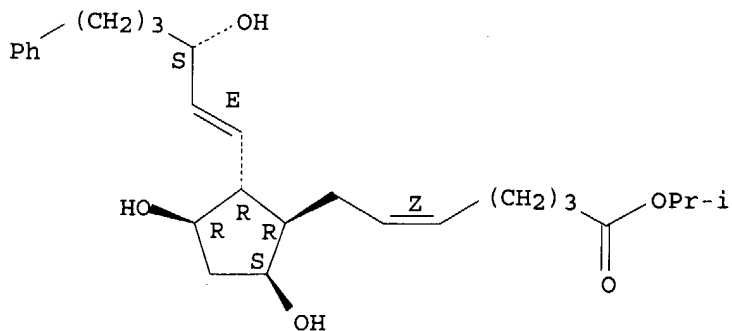
RN 130209-82-4 HCAPLUS
CN 5-Heptenoic acid, 7-[(1R,2R,3R,5S)-3,5-dihydroxy-2-[(3R)-3-hydroxy-5-phenylpentyl]cyclopentyl]-, 1-methylethyl ester, (5Z)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.
Double bond geometry as shown.



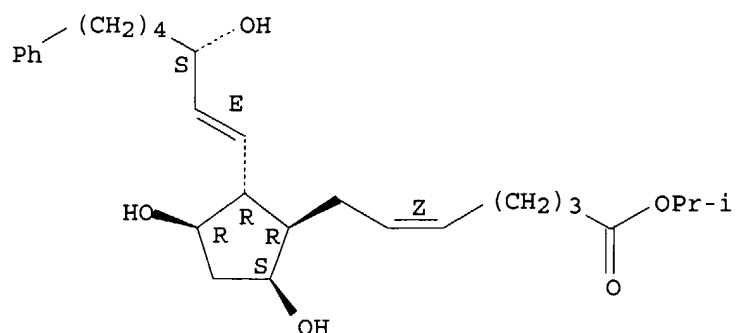
RN 130209-83-5 HCAPLUS
CN 5-Heptenoic acid, 7-[3,5-dihydroxy-2-(3-hydroxy-6-phenyl-1-hexenyl)cyclopentyl]-, 1-methylethyl ester, [1R-[1 α (Z), 2 β (1E, 3S*), 3 α , 5 α]]- (9CI) (CA INDEX NAME)

Absolute stereochemistry.
Double bond geometry as shown.



RN 130209-84-6 HCAPLUS
CN 5-Heptenoic acid, 7-[3,5-dihydroxy-2-(3-hydroxy-7-phenyl-1-heptenyl)cyclopentyl]-, 1-methylethyl ester, [1R-[1 α (Z), 2 β (1E, 3S*), 3 α , 5 α]]- (9CI) (CA INDEX NAME)

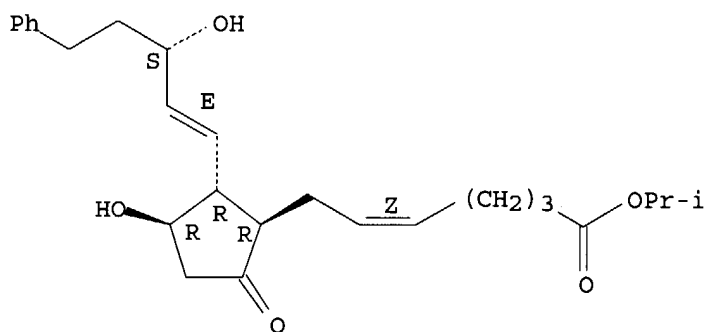
Absolute stereochemistry.
Double bond geometry as shown.



RN 130225-92-2 HCAPLUS

CN 5-Heptenoic acid, 7-[(1R,2R,3R)-3-hydroxy-2-[(1E,3S)-3-hydroxy-5-phenyl-1-pentenyl]-5-oxocyclopentyl]-, 1-methylethyl ester, (5Z)- (9CI) (CA INDEX NAME)

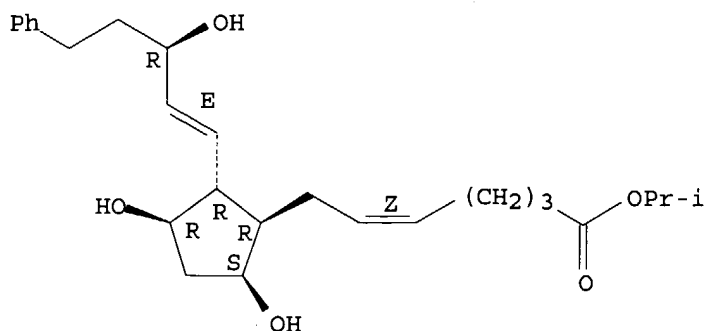
Absolute stereochemistry.
Double bond geometry as shown.



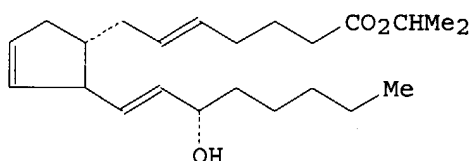
RN 130273-87-9 HCAPLUS

CN 5-Heptenoic acid, 7-[3,5-dihydroxy-2-(3-hydroxy-5-phenyl-1-pentenyl)cyclopentyl]-, 1-methylethyl ester, [1R-[1 α (Z),2 β (1E,3R*),3 α ,5 α]]- (9CI) (CA INDEX NAME)

Absolute stereochemistry.
Double bond geometry as shown.



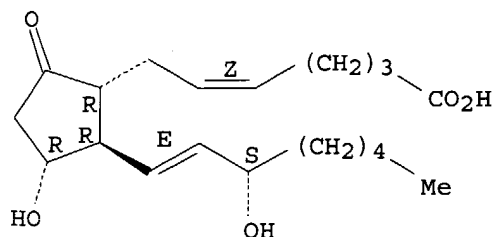
AN 1990:401022 HCAPLUS
 DN 113:1022
 ED Entered STN: 06 Jul 1990
 TI Eicosanoids as a new class of **ocular hypotensive**
 agents. 3. Prostaglandin A2-1-isopropyl ester is the most potent
 reported **hypotensive** agent on feline **eyes**
 AU Bito, Laszlo Z.; Miranda, Olivia C.; Tendler, Michael R.; **Resul,**
Bahram
 CS Coll. Physicians Surg., Columbia Univ., New York, NY, 10032, USA
 SO Experimental Eye Research (1990), 50(4), 419-28
 CODEN: EXERA6; ISSN: 0014-4835
 DT Journal
 LA English
 CC 2-9 (Mammalian Hormones)
 GI



I

AB **Intraocular** pressure reduction can be achieved in normotensive cat
eyes with the use of even lower doses of PGA2-1-iso-Pr ester
 (PGA2-IE) (I) than with PGA2, PGF2 α -1-iso-Pr ester (PGF2 α -IE),
 or any other known **ocular hypotensive** agent.
 Furthermore, single applications of 0.5 μ g of I maintain IOP redns. for
 ≤ 24 h. This **hypotensive** effect is enhanced during the
 first 3-5 days of daily treatment. IOP redns. were maintained for several
 months as long as I was applied daily or at least once every 48 h. None
 of the cats manifested signs of discomfort in response to treatment with
 doses ranging 0.10 - 1.25 μ g I. Moreover, the extent of anterior
 chamber flare was less than that typically observed after the topical
 application of **hypotensive** doses of PGE2, PGD2,
 PGF2 α , or the esters or tromethamine salt of PGF2 α . Although
 it is possible that the human **eye** would respond differently to
 prostaglandins of the A type, I or other esters of derived PGs of the A
 type, and probably the B type, may offer therapeutic advantages over the
 PGF2 α tromethamine salt and PGF2 α -IE, which have been shown to
 exert **hypotensive** effects on normal and **glaucomatous**
 human **eyes**.
 ST prostaglandin A ester **ocular hypotensive**; PGA2
 isopropyl ester **intraocular pressure**; **glaucoma** PGA2
 isopropyl ester
 IT Eye
 (intraocular pressure of, PGA2 iso-Pr ester decrease of)
 IT **Glaucoma (disease)**
 (treatment of, with PGA2 iso-Pr ester)
 IT Prostaglandins
 RL: BIOL (Biological study)
 (A, esters, eye intraocular pressure decrease by)
 IT 363-24-6, PGE2 13345-50-1, PGA2 13367-85-6, PGB2
 38562-01-5, PGF2 α -THAM 53764-90-2 114084-85-4
 RL: BIOL (Biological study)
 (eye intraocular pressure decrease by)
 IT 363-24-6, PGE2 38562-01-5, PGF2 α -THAM
 53764-90-2
 RL: BIOL (Biological study)
 (eye intraocular pressure decrease by)

RN 363-24-6 HCAPLUS

CN Prosta-5,13-dien-1-oic acid, 11,15-dihydroxy-9-oxo-,
(5Z,11 α ,13E,15S) - (9CI) (CA INDEX NAME)Absolute stereochemistry.
Double bond geometry as shown.

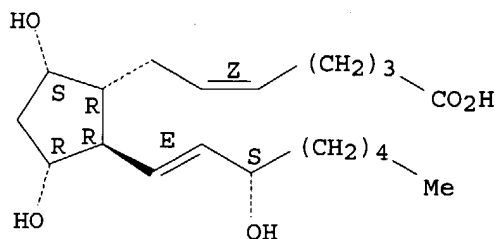
RN 38562-01-5 HCAPLUS

CN Prosta-5,13-dien-1-oic acid, 9,11,15-trihydroxy-,
(5Z,9 α ,11 α ,13E,15S)-, compd. with 2-amino-2-(hydroxymethyl)-
1,3-propanediol (1:1) (9CI) (CA INDEX NAME)

CM 1

CRN 551-11-1

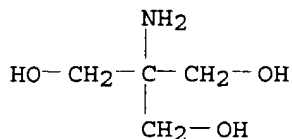
CMF C20 H34 O5

Absolute stereochemistry.
Double bond geometry as shown.

CM 2

CRN 77-86-1

CMF C4 H11 N O3



RN 53764-90-2 HCAPLUS

CN Prosta-5,13-dien-1-oic acid, 9,11,15-trihydroxy-, 1-methylethyl ester,
(5Z,9 α ,11 α ,13E,15S) - (9CI) (CA INDEX NAME)Absolute stereochemistry.
Double bond geometry as shown.

